Inside_Networks

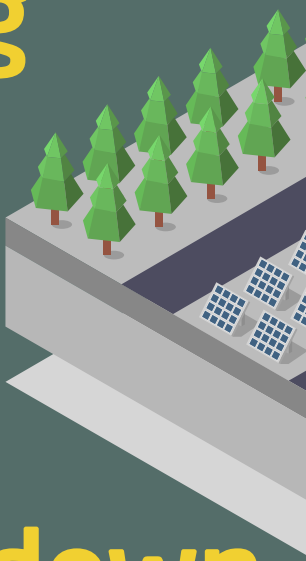
THE NETWORK INFRASTRUCTURE E-M

Do it

IS EUROPE AT THE B
MICRO

Playing the long game

AVOIDING SHORT-TERM THINKING ON EXTENDED DISTANCE CABLING



Top down approach

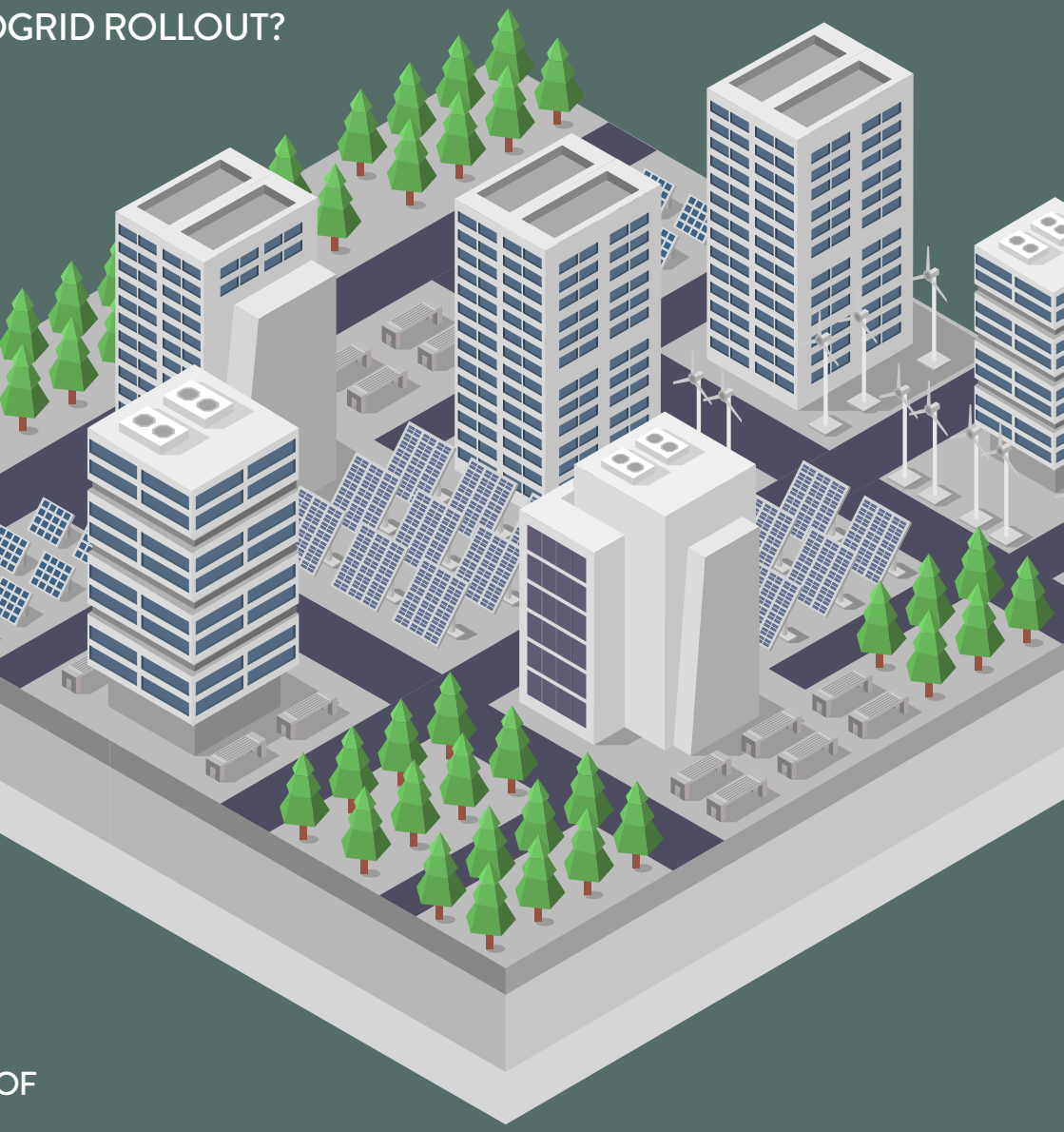
WHY DATA CENTRE ENERGY MANAGEMENT STARTS AT THE RO

AGAZINE WWW.INSIDENETWORKS.CO.UK

JUL/AUG
26

yourself

EGINNING OF A DATA CENTRE
GRID ROLLOUT?



OF

ESG REPORT 2026

ENVIRONMENTAL, SOCIAL & GOVERNANCE

The Right Partners Can Accelerate Your ESG Goals.

Discover How Siemon is Making Progress That Matters.

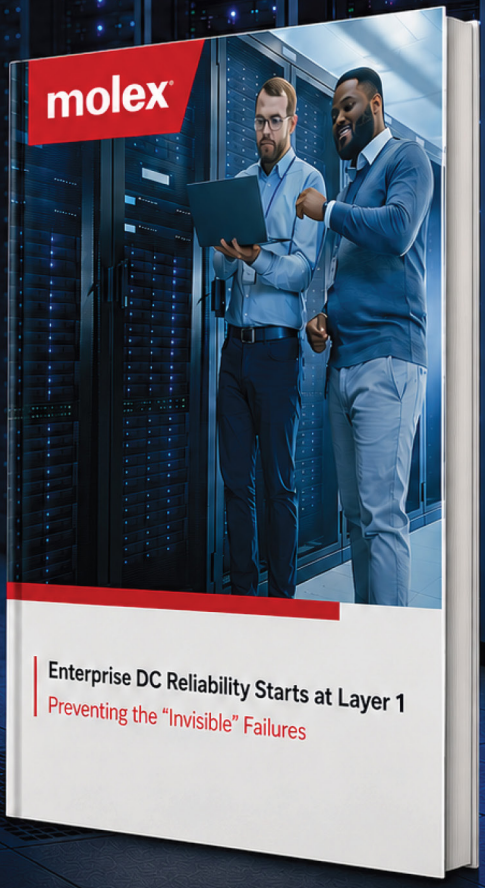
DOWNLOAD THE REPORT

Connecting the World to a Higher Standard

www.siemon.com/esg

molex

Prevent "Invisible" Failures in Your Physical Layer



Small infrastructure issues can create major operational risks.

Enterprise environments are becoming denser, faster, and more complex. When layer 1 infrastructure is overlooked, small physical layer issues can lead to downtime, troubleshooting delays, operational disruption, and scalability challenges.

This practical guide explores how enterprise teams are improving reliability, consistency, and operational resilience through smarter physical infrastructure strategies.

Build a More Resilient Infrastructure

Reduce recurring infrastructure issues and downtime risks

Improve operational consistency in high-density environments

Simplify scalability, maintenance, and change management

Scan to Get the Guide

+866-733-6659 | inquiries.ces.amers@molex.com | www.molexces.com

The shape of things to come

EDITOR
Rob Shepherd
07708 972170

SUB-EDITOR
Chris Marsland

ADVERTISING MANAGER
Kate Paxton
01603 610265

CREATIVE DIRECTOR
Vishnu Joory

TECHNOLOGY CONSULTANT
James Abrahams

CIRCULATION MANAGER
Debbie King

ACCOUNTS
Billy Gallop

CHALK HILL MEDIA

Earlier this year Pure Data Centres and AVK completed Europe's first, large scale, 110MW on-site microgrid in Dublin. I had the pleasure of attending the formal unveiling of this impressive feat of engineering and saw firsthand how it combines on-site generation, battery storage and smart controls to provide reliable, grid independent power.

The argument for microgrids is straightforward. As energy demand continues to climb with the growth of AI, conventional grid infrastructure is coming under increasing pressure, driving interest in alternative energy solutions. For data centres, microgrids present a compelling option by offering enhanced resilience, greater operational flexibility and a clear pathway toward decarbonisation.

While microgrids have been up and running in the US for some time, the question now is whether Europe's first on-site microgrid in Dublin could reshape how the rest of the continent thinks about powering AI infrastructure. This is the subject a specially selected panel of industry experts tackles in this month's Question Time.

On a not altogether unrelated subject, we take a deep dive into the latest developments concerning data centre energy management. Matthew Baynes of Schneider Electric examines how data centres can strengthen the UK's energy future and Louis Charlton of Global Commissioning tells us why the substation is no longer someone else's problem. One area that's often ignored is the roof and Errol Bull of Momentive Performance Materials explains why data centre energy management starts at the very top of the data centre.

This issue also has a special feature dedicated to copper cabling standards, comprising two excellent articles. In the first, Nikolay Efimov of Siemon looks at why cabling standards matter more than ever in a fast changing digital world. In the second, R&M's Matthias Gerber argues against short-term thinking when it comes to extended distance cabling.

Last but certainly not least, I'd like to say a massive thank you to all those who participated, sponsored and provided raffle prizes for the Inside_Networks 2026 Charity Golf Day. The amazing sum of over £7,300 was raised for Macmillan Cancer Support and a great time was had by all.

Rob Shepherd
Editor

The leading trade body for electrotechnical contractors

STRENGTHEN YOUR BUSINESS

THROUGH ECA MEMBERSHIP

- Recognised professional credibility across public and private sector clients
- Technical and business-critical expertise to support compliance, reduce risk and protect margins
- Tailored savings and services that deliver measurable value
- Access to a powerful peer network, shaping industry standards and policy

For electrotechnical contractors committed to excellence, resilience, and growth, ECA membership is essential.

Discover more at eca.co.uk/unlock

ECA

External threats are a rising cause of outages for data centres


Andy Lawrence

External infrastructure failures and outages linked to optical fibre and connectivity issues are becoming more prominent for data centres, according to Uptime Institute research. Despite that, on-site outages for data centres have declined for the fifth consecutive year.

The cost of major outages continued to rise, however, with 57 per cent stating that their most recent major outage cost over $100,000, while one in five reporting a cost of over $1mn. The leading cause of impactful outages was power, with failures involving uninterruptible power supply (UPS) systems, transfer switches and generators remaining prominent. Worsening grid constraints and high density workloads were also found to contribute to outages.

Andy Lawrence, founding member and executive director at Uptime Intelligence, said, 'We believe that, over time, failures will increasingly not be the result of a single point of failure but instead be linked to complex interactions between systems including software, networks and external dependencies. Digital infrastructure is becoming more distributed with outages originating outside the data centre, including those tied to power availability, network connectivity or the reliance on external cloud services playing a larger role.'

75 per cent of UK IT leaders lack robust AI governance strategies


Stuart Harvey

Research by Red Hat has revealed that three quarters of UK IT leaders are operating without strong AI governance frameworks. The survey across 500 IT leaders in the UK, France, Germany and Italy highlights a growing disconnect between AI deployment and the level of organisational control.

While 87 per cent of business IT leaders say their organisations are already using agentic AI, only a quarter report having a strong governance framework in place. Red Hat warns that many companies lack sufficient oversight of their data, infrastructure and relationships with AI providers, leaving them vulnerable as AI adoption accelerates. The findings also show that only 67 per cent of UK IT leaders have an AI exit strategy, meaning a third of organisations could struggle to switch providers without disruption.

Stuart Harvey, CEO of Datactics, commented, 'AI governance is often treated as a compliance tick rather than something embedded into the data architecture itself. This is a systems and design issue and businesses need continuous oversight, strong data foundations and flexible architectures, not just high level governance plans.'

National Data Centre Day launches #BackToSchool campaign to inspire new digital technology talent

National Data Centre Day (NDCD) has launched its 2026 theme. This year's campaign is shifting the industry's focus towards education and long-term engagement from an early stage. #BackToSchool responds directly to three of the sector's most pressing challenges – limited public awareness, gaps in education and a growing skills shortage. By engaging students at both primary and secondary school, NDCD is inspiring future talent to learn more about data centres.

The campaign calls on data centre operators, developers and technology providers to take an active role in engaging with schools and local communities and calls on public and private sector educators to make data centres part of the curriculum. By encouraging data centre companies to provide hands-on learning opportunities, the industry can offer a new and more informed understanding of the sector.

'This year's NDCD is about turning talk into action,' said Rory Flashman-Wells, co-founder of NDCD and managing director at Spa Communications. 'By starting education at an earlier stage, we have an important opportunity to change the narrative of how data centres are understood and help a new generation recognise the technology that powers data in their lives.'

Almost half of UK businesses hit by cyberattacks as threat remains 'widespread and significant'

43 per cent of UK businesses experienced a cyberattack or data breach in the past year, with threats remaining 'widespread and significant', according to the latest Cyber Security Breach Survey. It found that 69 per cent of large firms were affected, as well as 28 per cent of charities, while 29 per cent report incidents occurring at least weekly.

Phishing attacks remain the dominant threat, impacting 38 per cent of businesses and 25 per cent of charities. On top of this, ransomware reports fell to one per cent, down from three per cent last year. However, the financial and reputational impact is rising, with revenue loss at five per cent, up from two per cent, and reputational damage at three per cent, up from one per cent.

Andy Ward

Andy Ward, senior vice president international at Absolute Security, commented, 'These figures reinforce that the risk of businesses facing a cyberthreat is no longer a matter of if, but when. With the rise of AI in the cyber landscape, such as Mythos, these threats are only becoming smarter and faster.'

EUDCA signs joint industry statement on the European Commission's work on minimum performance standards

A joint industry statement has been published regarding the European Commission's work on minimum performance standards (MPSs), signed by the EUDCA, ITI, CCIA Europe and Eco-Association of the Internet Industry. It calls for a more measured and evidence based approach to the development of MPSs for data centres under the Energy Efficiency Directive (EED).


Michael Winterson

Data centres need regulation that is technically validated and reflective of operational realities across Europe. The sector's concern is to ensure the right process, resulting in this call for MPS development to be firmly grounded in data, industry consultation and technical validation.

Secretary general of the EUDCA, Michael Winterson, commented, 'This joint statement highlights the importance of sequencing policy development correctly. MPSs must be built on robust operational evidence, practical technical understanding and meaningful engagement with the industry. We welcome continued collaboration with the European Commission to ensure Europe achieves both its sustainability goals and its digital competitiveness objectives.'

Kao Data joins Discover Tech to open up technology careers for 600 young people across London and Manchester

Kao Data is now a sponsor of Discover Tech, a flagship work experience programme led by Cisco. Kao Data joins a line-up including Adobe, Accenture UK&I, IBM and World Wide Technology, as well as fellow employer members CDW, FDM, BBC, Highpoint and Softcat.

A pilot of the programme was launched in February 2026, with 93 per cent of participating students agreeing that they were more likely to consider a career in the tech industry. 91 per cent said they were more likely to consider working for one of the participating companies, while every volunteer involved said they would take part again.

In July Discover Tech will deliver a two-day experience for around 600 young people across London and Manchester. Kao Data will host approximately 40 students at its Harlow campus.

Kalay Moodley, chief people officer at Kao Data, said, 'The data centre industry is facing a significant skills shortage. If we are serious about closing that gap we must reach into communities that have historically been overlooked and show young people what a career in our industry can look like.'

NEWS IN BRIEF

Huawei plans to produce semiconductors using a new technology within five years. The company added that by 2031 its high end chips would achieve transistor densities comparable to those of 1.4nm process technology.

NTT Data is on track to reach net-zero across Scope 1 and 2 in data centres by 2030 and global offices by 2035.

Stellanor Datacenters has completed its acquisition of eight data centres from Redcentric, serving approximately 450 enterprise customers. It marks a milestone in Stellanor's strategy to build a leading platform of urban data centres serving national and international enterprises with wholesale and AI-ready colocation capacity.

According to NordLayer, 82 per cent of IT professionals report their organisation experienced a web-based security incident in the past year, with half describing the impact as moderate or severe.

Analysis of UK government data by LSBUD has uncovered stark regional differences in planning approval rates across the UK. The North East has the highest success rate, with 92 per cent of applications being approved. London had the lowest success rate, with only 82 per cent of applications receiving approval.

Future-ready liquid cooling, **built for AI**

Liquid Cooling Solutions

Scalable and reliable heat management, designed for demanding data centres.

Scan the code to explore liquid cooling solutions

se.com/uk

Schneider Electric™

Why every country needs a da

Hi Rob

Electricity. Water. Gas. For decades, these have been the essential utilities so fundamental that no government leaves them entirely to market forces. Today, data infrastructure is arguably the fourth. And yet, while governments have longstanding strategies for managing and maximising the other three, most are still approaching data centre development reactively, responding to applications rather than shaping outcomes. That needs to change.

Data centres are not a future consideration. European data centres consumed an estimated 96TWh of electricity in 2024. By 2035, that figure is projected to reach 236TWh, a rise of nearly 150 per cent in a single decade, becoming one of the biggest new sources of power demand on the continent. Countries that are passive to this growth will find themselves reacting to decisions already made by others, on terms they had no hand in shaping.

The European data centre market was valued at $47bn in 2024 and is projected to reach $97bn by 2030. In Germany, the sector contributed an estimated €10.4bn to GDP in 2024 yet is expected to more than double to €23bn by 2029. In the Netherlands, data centres already account for 20 per cent of all foreign direct investment. Done well, a strategy can direct this economic activity to the regions that need it most, not just the cities with the most obvious land and power availability.

Beyond investment figures, data centres can be one of the most powerful levers for accelerating renewable energy deployment. They are large, long-term, creditworthy off-takers, exactly the kind of customer that can make large renewable energy projects financially viable. A government that understands this can use its data centre strategy to actively drive clean energy investment.

Across Europe's Frankfurt, London, Amsterdam, Paris and Dublin (FLAP-D) data centre markets grid congestion has become the defining constraint. In 2023, data centres consumed between 33 per cent and 42 per cent of all electricity in Amsterdam, London and Frankfurt, and nearly 80 per cent in Dublin. Ireland imposed a moratorium on new connections and Amsterdam followed. Investment is now moving to countries with better grid availability, which are projected to grow at nearly double the rate of the traditional hubs between now and 2030. Countries that can halve connection times are set to attract around 20 per cent more data centre growth.

A strategy that confronts the challenge of grid constraints and creates a framework that aligns planning, grid access, zoning and fiscal frameworks into a single coherent position can turn this potential constraint into a genuine competitive advantage.

One aspect of data centre development that doesn't get enough honest attention is community pushback. When a large development arrives with significant impacts on local infrastructure but offers little in return by way of local jobs, tax revenue or services, opposition is a rational response. In the US last year, 25 data centre projects were cancelled or withdrawn in the face of community opposition. That's a significant loss for

ata centre strategy

developers, investors and governments.

A national strategy that requires developments to demonstrate genuine local benefit, directs facilities to appropriate zones, rather than wherever planning resistance is weakest, and builds community engagement into the process from the start, reduces that risk substantially. This is better for communities, better for developers who need planning certainty and better for governments that want the economic benefits without the political fallout.

Data centre development touches energy policy, planning, economic development, digital infrastructure, skills and environmental regulation. Without genuine coordination across those areas you end up with a document that has teeth on paper but no bite in practice.

The people shaping that strategy also matter enormously and they need to understand the full lifecycle of a data centre – from site selection and planning, through grid connection and construction, to long-term operations and community impact. This is far more complex than the financials on a spreadsheet suggest and advisors who only understand part of that picture will produce a strategy with blindspots. The most effective strategies are built by people who understand the sector deeply but owe nothing to any single player in it.

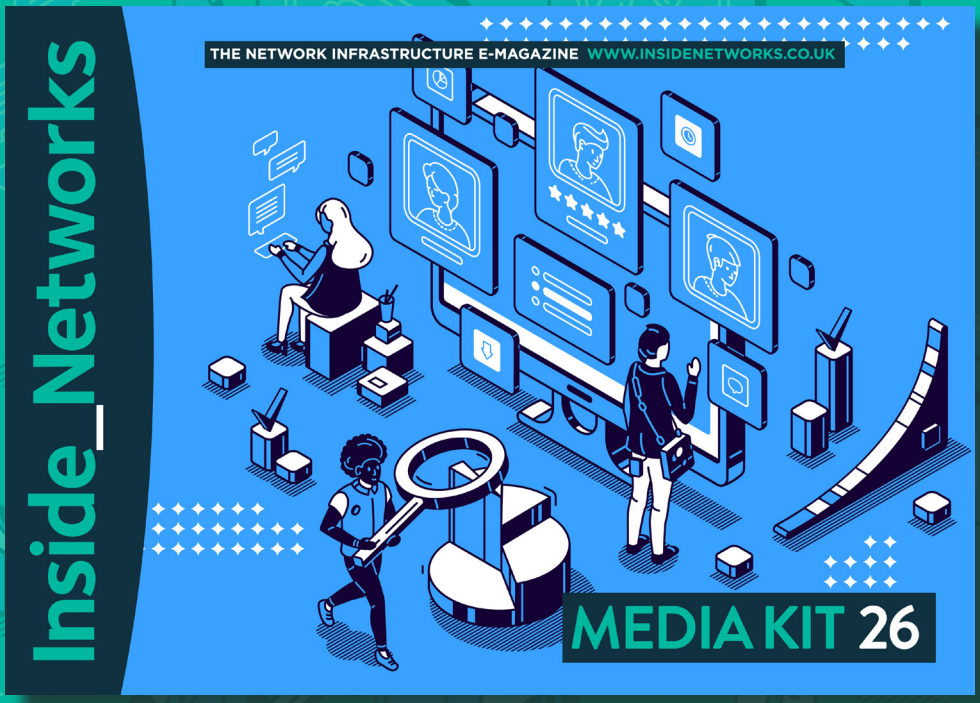
James Rogers Jones
BCS Consultancy

Editor's comment

Treating data infrastructure as a fourth utility is well overdue. Yet government planning, energy policy and digital strategy often work at cross purposes, creating delays, uncertainty and missed investment.

As James makes clear, a more coordinated model is essential. Aligning infrastructure planning with energy capacity and economic priorities would give investors clarity, while ensuring communities aren't blindsided by sudden data centre expansion. Europe has already seen the consequences of getting this wrong, with political backlash, grid strain and stalled projects.

All you need to know



CLICK ON THE COVER TO VIEW THE 2026 MEDIA KIT

Grid lock

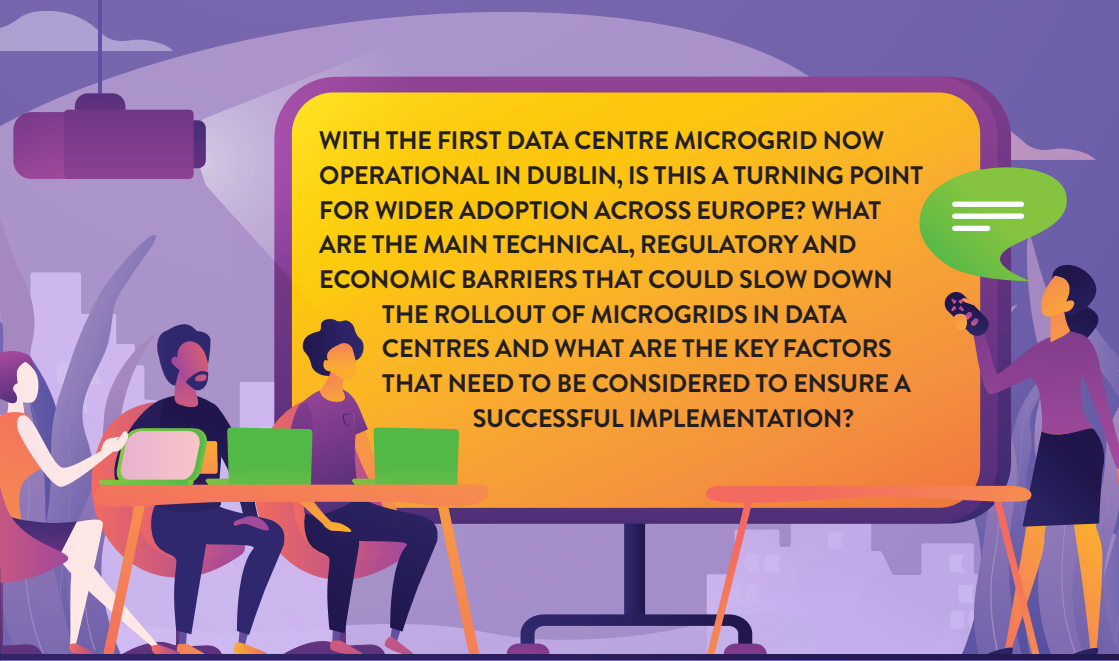
Europe's first large scale, 110MW off-grid data centre microgrid recently became operational in Dublin. Inside_Networks has assembled a panel of industry experts to discuss whether this signals a turning point in how digital infrastructure is powered across the continent

Microgrids are localised energy systems that can operate independently or alongside the main grid, combining generation sources such as renewables, battery storage and back-up power. As energy demand surges alongside AI and cloud computing, traditional grid connections are increasingly strained, making alternative solutions more attractive. For data centres, microgrids offer resilience, flexibility and a path toward decarbonisation.

However, scaling microgrids across the data centre industry is not without its challenges. Technical complexity remains a barrier, particularly in integrating multiple energy sources while maintaining uptime.

Regulatory frameworks across Europe are often not yet designed for decentralised energy systems, creating uncertainty for operators seeking approvals or grid exemptions. Furthermore, economic factors also play a decisive role and high upfront capital costs could deter investment despite long-term savings potential.

To find out whether this is just the beginning of a widespread microgrid rollout that offers a potential solution to growing energy constraints, Inside_Networks has brought together a panel of industry experts to give us their views.



JAVIER CAVADA

CEO AND PRESIDENT EMEA AT MITSUBISHI POWER

Microgrids are the topic of the hour and it's very encouraging to see the first operational data centre microgrid in Dublin. It's an important mark of progress and the question on all our minds is does this signal the beginning of a wider rollout across Europe?

First, let's be clear about what this means for Ireland. It demonstrates that under real grid conditions microgrids are technically viable. Ireland has the constraints of a small island grid, combined with soaring data centre demand and connection backlogs – exactly the type of commercial and technical conditions where a microgrid makes compelling sense. The problem created the solution.

But this example cannot necessarily be directly translated to solving the European rollout question. It requires something more demanding and that is the ability to adapt to very different regulatory, technical and economic realities. There is no single European energy market – there are dozens of them.

Regulatory fragmentation is arguably the bigger barrier. The continent's energy framework was built nation by nation, and it shows. Policy, permitting and grid architecture reflect decades of independent decision making that no single directive has fully unwound. A configuration that works in Ireland may be entirely unworkable in Germany or Poland and no amount of good technology overcomes that without the right local expertise.

On the technical side, the challenge is also real. Data centres do not just need enormous amounts of power, they need it with absolute reliability. Integrating renewables, storage and gas into a stable system demands sophisticated control architecture and this is where proven technology genuinely earns its place. Flexibility and uptime are not competing priorities – they are the same requirement.

And from an economic perspective, upfront capital costs, uncertainty around long-term energy pricing and unclear revenue models for flexibility can also slow adoption. Developers need confidence that investments will deliver both resilience and financial returns.

Ultimately, successful implementation will depend on aligning technology, regulation and economics, supported by experienced partners who can deliver reliable, long-term solutions in a highly complex and evolving market.

'IRELAND HAS THE CONSTRAINTS OF A SMALL ISLAND GRID, COMBINED WITH SOARING DATA CENTRE DEMAND AND CONNECTION BACKLOGS – EXACTLY THE TYPE OF COMMERCIAL AND TECHNICAL CONDITIONS WHERE A MICROGRID MAKES COMPELLING SENSE.'

BEN PRITCHARD
CEO AT AVK

The launch of Europe's first large scale, off-grid data centre microgrid in Dublin marks an important milestone for how digital infrastructure is powered.

One of the biggest challenges that the data centre industry is facing is power and its access to it, especially with grid constraints in data centre development. Grid connection delays alongside restrictions in key digital markets, including Ireland and the Netherlands, are moving operators quickly towards alternative energy strategies.

Amongst the benefits of deployment being achievable, the off-grid microgrid does present challenges when replicating this model across Europe. From a technical perspective, delivering a system at scale requires the integration of multiple energy sources capable of supporting AI-driven workloads. This adds increased demand on specialist engineering expertise, placing more pressure on the skills gap the industry is already facing.

While the facility in Dublin allows for development in grid constrained markets, they require significant investment for long-term energy supply. Regarding regulations, the project shows how current frameworks, previously built around centralised grids, are still adapting to decentralised on-site generation.

A critical factor in Europe's adoption of microgrids revolves around designing them as integral parts of data centres from the beginning, enabling coordination between generation and storage. Flexibility is fundamental to this, with various technologies allowing the system to operate independently while future proofing grid integration.

Early collaboration between developers, energy partners and regulators is another key enabler, ensuring alignment across technical, regulatory and commercial considerations. Finally, looking at the future for the industry with readiness for renewable integration and low carbon fuels ensures microgrids can evolve alongside the wider energy transition.

The Dublin announcement highlights that large scale microgrids, this one with an installed capacity of 110MW, are viable opportunities. It provides a clear model for how data centres can support both digital growth and Europe's wider energy transition.

'A CRITICAL FACTOR IN EUROPE'S ADOPTION OF MICROGRIDS REVOLVES AROUND DESIGNING THEM AS INTEGRAL PARTS OF DATA CENTRES FROM THE BEGINNING, ENABLING COORDINATION BETWEEN GENERATION AND STORAGE. FLEXIBILITY IS FUNDAMENTAL TO THIS, WITH VARIOUS TECHNOLOGIES ALLOWING THE SYSTEM TO OPERATE INDEPENDENTLY WHILE FUTURE PROOFING GRID INTEGRATION.'

EMMA FRYER

DIRECTOR OF PUBLIC POLICY EUROPE AT CYRUSONE

Microgrids generally comprise a network that connects local power generation units like energy centres, energy storage such as battery energy storage systems (BESS), and a large energy consumer such as a data centre. The purpose is to match the requirements of the demand facility, which in the case of data centres is likely to be a high flat load. In terms of power generation and energy storage type, microgrids are technology agnostic.

As I see it, the primary challenge facing the adoption of microgrids to power data centres is the relationship between generation type, location and carbon credentials. Take a microgrid relying on renewables and BESS – immediately there are two issues.

Firstly, this would need a grid connection to stabilise intermittent power. The microgrid is then subjected to the associated delays and uncertainties of the connection demand queue. Secondly, the land needed to service the load from local renewables would be significant. In locations where data centre energy demand is most constrained and where microgrids could enhance supply, there just isn't physical space for the power installation required.

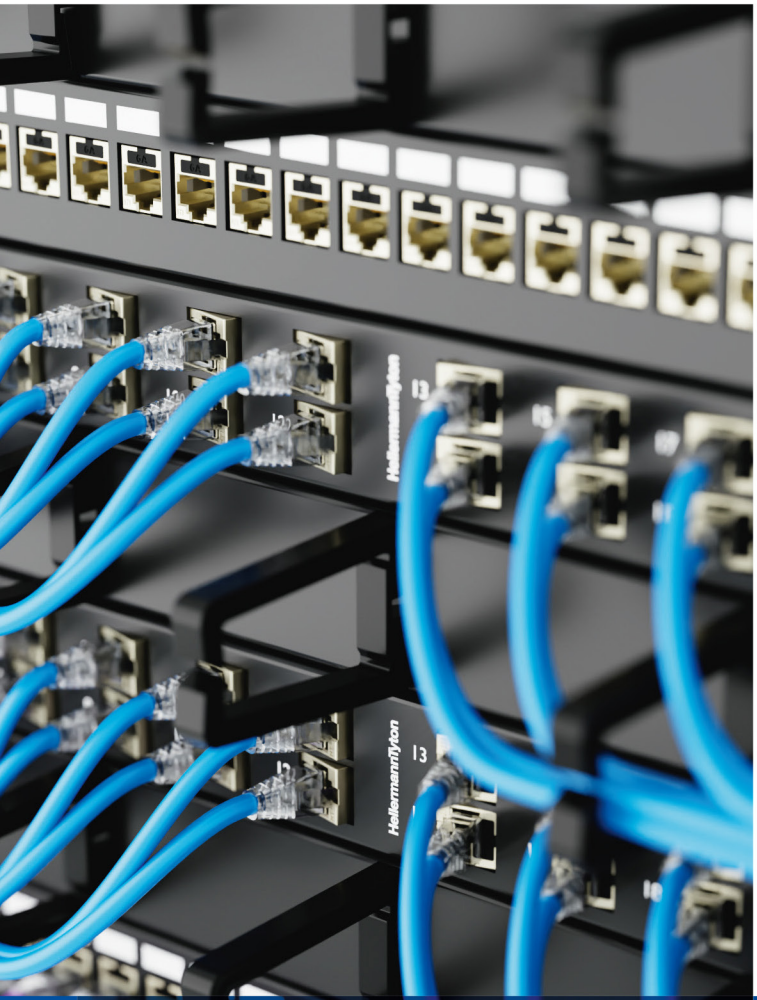
On the other hand, a truly islanded microgrid would need to rely on nuclear (a long way off) or gas (a fossil fuel) to provide the necessary generating capacity. Primary dependence on gas in a local behind the meter system sits uneasily with operator net-zero commitments and, if used as an interim measure, may result in a large, stranded asset. Gas may even, eventually, be regulated out, leaving an even bigger stranded asset in the form of the data centre itself!

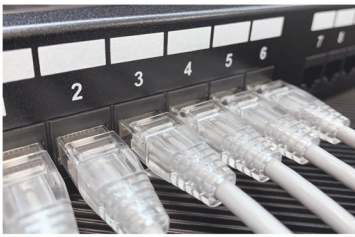
There is also the problem that data centre developers are likely to be unenthusiastic about becoming energy generators, an activity outside their core business that will impose a whole new raft of unfamiliar regulatory requirements. A multi-stakeholder solution is likely to be more attractive, but this presents the logistical issue of aligning multiple entities. Experience with heat networks suggests that this is not always easy.

Whichever way you look at it, powering data centres through microgrids is not for the fainthearted.

'AS I SEE IT, THE PRIMARY CHALLENGE FACING THE ADOPTION OF MICROGRIDS TO POWER DATA CENTRES IS THE RELATIONSHIP BETWEEN GENERATION TYPE, LOCATION AND CARBON CREDENTIALS.'

HellermannTyton





Complete Cat6A and Cat6 Copper LAN Solutions with HTC Series.

With a tool-less jack, range of patch panels and outlets, plus accessories including LC and Euro modules, faceplates and back boxes.

MADE TO CONNECT

PAUL MELLON

OPERATIONS DIRECTOR AT STELLIUM DATACENTERS

Microgrids for UK data centres aren't being held back by technical limitations –they're mainly blocked by regulation and economics. The technology itself is already viable, as seen by the hyperscaler deployment in Ireland.

In the US microgrids are increasingly commonplace and scaling up. Operators typically enjoy greater flexibility from a regulatory perspective, allowing campuses to more easily integrate energy sources. By comparison, UK and European Union (EU) operators must wait patiently for grid connections as their primary source of power and are somewhat 'pre-conditioned' to using on-site diesel, gas and battery energy for emergency back-up.

Here, microgrid uncertainty and delay has been caused by policy conundrums such as cost sharing with the grid. Integration with the wider energy system is unclear, muddied by policy making being overly grid-centric. Furthermore, local authorities often lack expertise when it comes to evaluating the case for complex energy systems such as microgrids.

There are also economic challenges. While microgrids can be cheaper long-term they have significant upfront capital costs. Compared to the scale economies of the UK grid, a standalone microgrid will initially be more expensive per MWh.

To enable the proliferation of microgrids, government regulators, policy makers and local planners need to see data centres in a new light. Operators are both energy consumers and grid contributors. We need ultra-reliable, high quality power with the ability to seamlessly export or import power dynamically. The way forward is for a more standardised microgrid licensing framework, clear rules on grid charges, faster planning pathways for energy infrastructure and incentives for flexible, decentralised energy systems.

In 2025 the UK government released a report titled Review of Electricity Market Arrangements (REMA). This will likely affect future microgrid design and decision making for data centres – a clearly defined electrical boundary, a controller that can actively manage power flows and loads, and the ability to disconnect and reconnect from the wider grid. Although local generation or storage is not technically required it will be a prerequisite in most use cases.

Data centres which support the REMA guidelines will be actively supported by the National Energy System Operator (NESO), pushing microgrids/data centre campuses into closer engagement.

'TO ENABLE THE PROLIFERATION OF MICROGRIDS, GOVERNMENT REGULATORS, POLICY MAKERS AND LOCAL PLANNERS NEED TO SEE DATA CENTRES IN A NEW LIGHT.'

MATTHEW BAYNES

VP SECURE POWER & DATA CENTRES AT SCHNEIDER ELECTRIC UK&I

The answer is likely yes and this development highlights the growing momentum behind microgrids. The need for change is clear. In Ireland, data centres already account for around 22 per cent of total electricity use, up from just five per cent in 2015, and this could rise further in the coming years.

Globally, demand is growing quickly, with estimates suggesting data centre electricity use could more than double by 2030. At the same time, grid connections across Europe can take many years, especially in key hubs. Taken together, this suggests the grid alone may struggle to keep pace. In that context, projects like AVK and Pure Data Centres' 110MW microgrid in Dublin is an excellent example of a more flexible and integrated approach.

From a technical perspective, running a microgrid at this scale requires advanced digital tools to balance supply and demand in real time, alongside investment in storage, renewables and future fuels like hydrogen. These capabilities are increasingly supported by advances in digital energy management and automation.

Economically, while microgrids require upfront investment, they deliver long-term value through improved resilience, energy efficiency and greater control over energy use. Regulation is another area that continues to evolve. At present, not all European countries have clear or consistent rules for how microgrids should operate alongside the main grid, which can slow progress.

What the Dublin project does show, however, is a clear path forward. A gradual integration with the grid, designing systems with renewables in mind from the start and working closely with national energy strategies remain an important focus.

In that sense, the technology itself is ready. The next step is continuing to create the right conditions across Europe to allow it to scale more easily and consistently as part of a more stable, digital and sustainable energy system.

'GLOBALLY, DEMAND IS GROWING QUICKLY, WITH ESTIMATES SUGGESTING DATA CENTRE ELECTRICITY USE COULD MORE THAN DOUBLE BY 2030. AT THE SAME TIME, GRID CONNECTIONS ACROSS EUROPE CAN TAKE MANY YEARS, ESPECIALLY IN KEY HUBS. TAKEN TOGETHER, THIS SUGGESTS THE GRID ALONE MAY STRUGGLE TO KEEP PACE.'

FRANCESCO MARASCO

VP ENERGY OPERATIONS & SUSTAINABILITY AT NLIGHTEN

The Dublin project is less a turning point than a visible marker of a trend already underway. Across Europe, developers are responding to the same constraint – the difficulty of obtaining grid connection capacity where compute demand is concentrated – by turning to on-site generation.

Demand for digital infrastructure is not going to stop. When the wires are not available, the gas network is increasingly the path of least resistance – established commercial frameworks, spare capacity in many regions and connection timelines measured in months rather than years.

The technical barriers are real but solvable. Integrating prime generation, storage, back-up and grid interface into an architecture that meets Tier III or Tier IV resilience requires engineering discipline not every operator has in-house. Uptime Institute expectations were not written with variable generation in mind and we lack the operational track record to claim that batteries combined with variable renewables can deliver equivalent availability.

The regulatory barriers are harder. Several European jurisdictions now operate under what is effectively a double moratorium – grid connections for new large loads are constrained or paused and gas connections are themselves restricted as part of broader heat decarbonisation policy. How regulators treat on-site generation in that context will shape European data centre development for the next decade.

The economic risk is less about gas price volatility, which markets handle routinely, and more about the structural decoupling of power and gas prices. As renewables compress wholesale power, the spark spread that justifies on-site gas generation narrows, regardless of where gas itself trades. On the wider issue, three factors matter most:

- Treat decarbonisation as a portfolio question. Biomethane reaches site through the gas grid and can only ever represent a small share of the mix, so certificates, power purchase agreements (PPAs) and granular accounting are the practical levers.
- Exploit the heat. If we cannot always decarbonise primary energy, we must do more on decarbonising useful energy through combined heat and power (CHP), heat recovery and district heating.
- Engage regulators early on. Scarce grid capacity should be prioritised for sites that can demonstrate genuine energy reuse.

‘WHEN THE WIRES ARE NOT AVAILABLE, THE GAS NETWORK IS INCREASINGLY THE PATH OF LEAST RESISTANCE – ESTABLISHED COMMERCIAL FRAMEWORKS, SPARE CAPACITY IN MANY REGIONS AND CONNECTION TIMELINES MEASURED IN MONTHS RATHER THAN YEARS.’


«Simply better connected»
R&M*freenet* 4.0 – the structured cabling system for smart, modern buildings
Reichle & De-Massari AG
Binzstrasse 32, 8620 Wetzikon
+41 (0)44 933 81 11, hq@rdm.com
www.rdm.com
R&M

Giles Pattison joins EfficiencyIT as business transformation director to accelerate scale and service excellence

EfficiencyIT has appointed Giles Pattison as its new business transformation director. The appointment bolsters the company's senior leadership team as EfficiencyIT continues to expand its prefabricated, modular data centre business in response to rising AI and high density compute demands.


Giles Pattison

Pattison has more than 20 years of commercial leadership experience. The majority of this was spent within the IT channel leadership team at Schneider Electric and he brings deep expertise in sales strategy, marketing operations and commercial business transformation across the data centre, channel and digital infrastructure sectors.

Pattison said, 'This is an exciting time for the modular data centre industry. Speed to market, scalability and best in class technology will unlock the potential of AI infrastructure and EfficiencyIT is well placed to support that growth. I am a firm believer in the power of the partner ecosystem and I am looking forward to working with the team to help shape the next chapter.'

Excel Networking Solutions launches new website to enhance customer experience and project delivery

Excel Networking Solutions has redesigned its website, delivering a faster, more intuitive and role based digital experience for customers across the globe. The website has been purpose built to make it easier than ever for visitors to find the information, tools and resources they need and to support every stage of a project – from early design through to product selection and delivery.


Tracey Kernaghan

Featuring a fresh, modern design, the new website offers a cleaner, more intuitive user interface that is fully optimised for mobile, tablet and desktop. Improved navigation and clearer structure ensure key information is quick and easy to locate, helping users move seamlessly through the site and access exactly what they need with minimal clicks.

Tracey Kernaghan, marketing manager at Excel Networking Solutions, said, 'The website allows visitors to quickly access tailored content, tools and resources based on how they work with Excel, whether specifying, installing or distributing products. These enhancements provide a more practical, project focused approach, saving time and reducing complexity for all users.'

Kao Data promotes Spencer Lamb to CEO to lead the company's next phase of growth

Kao Data has appointed Spencer Lamb as its chief executive officer (CEO). With more than 20 years' experience within the data centre industry, and having joined Kao Data in January 2020, Lamb steps up from his previous role as managing director and chief commercial officer (CCO).


Spencer Lamb

As CEO, Lamb will lead day to day operational leadership and growth execution across Kao Data's expanding UK platform, driving the continued development of its AI-ready data centre capacity and ensuring the company's design and delivery model keeps pace with the rapidly changing demands of AI and high density compute. He has also proactively championed the development of homegrown AI infrastructure within the UK and has become a trusted and respected figure within the data centre industry.

Lamb said, 'I am excited to step up and lead the company as its CEO. I am also looking forward to ensuring Kao Data continues to play a strong and defining role in the UK's AI infrastructure story, and that we keep delivering for our customers, our people and the communities we operate in.'

Gary Watson joins Stellanor as managing director to drive integration and operational excellence

Stellanor Datacenters has appointed Gary Watson as managing director. He will lead the next phase of the company's growth strategy, with responsibility for operational delivery, platform integration, commercial performance, customer engagement and the continued expansion of Stellanor's urban data centre footprint.


Gary Watson

Watson has over three decades of leadership in the data centre and IT infrastructure sectors including senior roles at Keppel DC REIT, SunGard Availability Services, Hosting365 and Telecity. His proven industry experience, combined with a strong track record of platform growth, integration, operational leadership and customer delivery, positions him to lead Stellanor through its next stage of expansion.

Watson commented, 'This is an exciting point in Stellanor's journey. We have a strong portfolio, a clear strategy and an exceptional team. Our focus now is on integration, ensuring the highest standards across the platform and continuing to deliver operational excellence for our customers.'

nLighten appoints Dame Dawn Childs as CEO and Matthew Harris as CFO as AI drives edge infrastructure demand

nLighten has appointed Dame Dawn Childs as chief executive officer (CEO) and Matthew Harris as chief financial officer, further strengthening its leadership team as the company enters its next phase of growth.

Childs joins from Pure Data Centres, where she spent nearly five years, and she will continue as a non-executive director for Pure Data Centres as part of this transition. Harris brings over 15 years of financial and strategic experience across private equity backed and listed businesses in the digital infrastructure, technology and investment sectors. Childs and Harris will lead nLighten's continued expansion across key European markets, with a focus on organic growth, strategic acquisitions and continued investment in sustainable infrastructure solutions.

Nick Read, chairman at nLighten, said, 'We are delighted to welcome Dawn and Matthew to nLighten. Dawn's deep experience leading complex mission critical infrastructure businesses makes her exceptionally well suited to guide the company's continued growth, while Matthew's strong financial and strategic expertise will be invaluable as we scale the platform.'

JB Associates appoints new partner as it continues growth drive

JB Associates has appointed Rob Crane as a partner, reinforcing its leadership team as it continues its sustained period of expansion. As part of this next chapter, Crane will continue as part of the senior management team and become a shareholder in the business.

By strengthening its senior team, JB Associates aims to further capitalise on increasing demand for its expertise in the design and delivery of resilient, high performance infrastructure, particularly in the data centre sector. Crane will continue to play a key role in supporting the company's continued growth trajectory.

Ashley Buckland, managing partner at JB Associates, said, 'Since joining the business, Rob has made a significant impact, playing a key role in our growth and helping to shape the company's strategic direction. His appointment as partner marks another exciting milestone as we continue to build for the future with a strong leadership team and a clear vision.'

CHANNEL UPDATE IN BRIEF

Apx Data Centre Solutions has made three key leadership appointments. Kris Wauters joins as enterprise manager for the Benelux region, Stuart Newman joins the team as business development manager for the UK, Ireland and European markets, and Philippe Torres joins the company from FläktGroup and Schneider Electric, where he managed precision cooling solutions.

Black & White Engineering has opened an office in Melbourne as part of its expansion across Asia-Pacific. The Melbourne office establishes the company's first permanent presence in Australia and will support delivery across the local market and wider region. Black & White Engineering expects its APAC headcount to grow by 165 per cent between 2025 and 2026, with a projected increase of around 316 per cent by 2029 as delivery capability scales across the region.

Eficode has appointed Staffan Strand as its new chief executive officer. Strand brings more than two decades of senior leadership experience in IT consulting, managed services and digital transformation, most recently serving as president and chairman at Nexer Group.

Vertiv has acquired Strategic Thermal Labs. The acquisition extends Vertiv's thermal chain strategy by strengthening engineering capability at the interface between server side liquid cooling and supporting infrastructure. The company has also appointed Frieda He as chief procurement officer.

Building on solid foundations

Nikolay Efimov of Siemon looks at why cabling standards matter more than ever in a fast changing digital world

As network infrastructure is now required to support higher speeds, greater power delivery and a growing number of connected systems, the role of cabling standards has become increasingly important. While technology continues to evolve, standards remain essential for ensuring interoperability, consistency and long-term confidence in infrastructure investments.

SHIFTING SCOPE

Global frameworks such as ISO/IEC 11801, as well as installation and application specific standards, define the foundation for structured cabling design and performance. These standards provide a common basis for how systems are specified, installed and tested across different regions and markets.

Copper cabling standards have always been a core part of network design and installation. However, as the function of the network expands, the scope of these standards also expands. In the past, standards were primarily focused on parameters related to data transmission. Today, copper cabling systems are designed not only for data, but also for power delivery.

INTELLIGENT DESIGN

Power over Ethernet (PoE) is now widely used across CCTV, access control, wireless networks and IoT devices, all of which are part of modern smart buildings. As power levels increase and cable volumes grow, more parameters must be considered during design and installation. These include heat generation, component quality, installation practices, environmental conditions and temperature variation. Design, product selection and installation practices must account for these factors, while testing must be applied consistently to verify transmission performance against relevant criteria.

In this context, standards are not just a reference document, they are a practical design framework for predictable system performance. They allow a set of individual components to function as a unified infrastructure platform capable of supporting multiple systems over the full lifecycle of a building.

Standards define requirements not only for transmission performance but also for installation and testing. This creates a common technical framework for designers, installers, manufacturers and end users. It ensures that all parties work to the same requirements and can verify performance against clearly defined criteria.

BUILT TO LAST

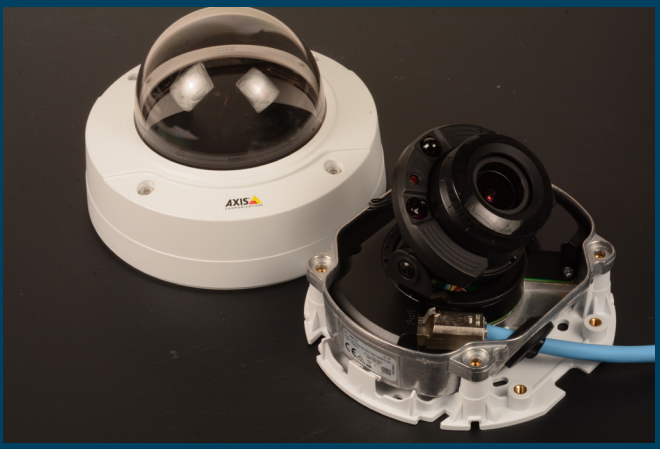
One of the key challenges in modern networks is the difference in lifecycle

‘Standards must distinguish between long-term technology developments and short-term trends. They should not respond to every new product or market claim but instead focus on technologies that have been validated through practical use and testing.’

between cabling infrastructure and active equipment. Active equipment is replaced more frequently as new technologies are introduced. In contrast, a cabling system is expected to remain in place for many years. Replacing it each time equipment is upgraded is not practical due to cost and operational impact.

Standards provide the link between these two cycles. They allow infrastructure to support multiple generations of active equipment without requiring constant replacement. This creates a balance between innovation and long-term stability.

New technologies require flexibility, but infrastructure must remain predictable. Standards provide a framework that allows new applications and higher performance requirements to be introduced in a controlled way. They define clear performance levels and design principles that support scalability over time. This is particularly important in environments such as smart buildings, large enterprise sites and campus networks. In these cases, the cabling system must support a wide range of applications, often using equipment from different vendors and across multiple system types.



KEEP IT SIMPLE

In multi-vendor environments, standards act as a common technical language. They define the requirements for transmission performance, interfaces, connection methods and testing procedures. This reduces the risk of incompatibility and simplifies both design and deployment.

Without standardisation, each manufacturer could apply proprietary approaches. This would create challenges in system integration, performance

verification and responsibility for system performance. Standards reduce these risks and allow customers to choose solutions with greater flexibility and confidence.

DEMAND DRIVEN

Emerging application demands are placing additional requirements on copper cabling systems. These demands are driven by a combination of speed, power, connection density and operating conditions. PoE continues to expand, with more devices relying on the cabling system for both data and power. This increases the importance of considering cable heating, bundle sizes and environmental conditions during design.

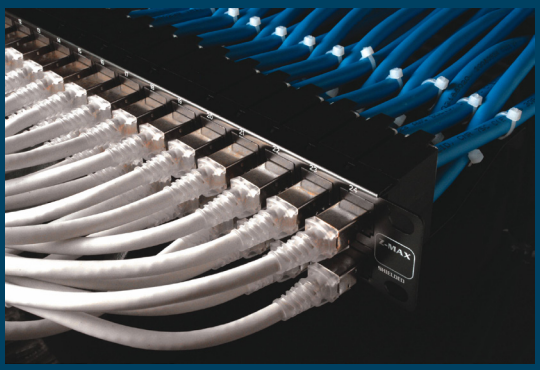
Wireless networks are also evolving. New Wi-Fi standards require multigigabit connections and higher power levels. Access points may require 2.5Gb/s, 5Gb/s or 10Gb/s connections, along with PoE. This means that the cabling system must be designed to meet current performance requirements while also providing headroom for future upgrades.

Security systems such as CCTV introduce additional demands. Modern cameras, particularly outdoor and pan-tilt-zoom (PTZ) models, require higher power and stable data transmission. In some applications, designers may also face requests to support devices located beyond the standard 100m channel distance. These cases require careful application specific assessment because they fall outside normal generic cabling assumptions and may require additional guidance, manufacturer validation or specific design conditions. This has led to the development of additional guidance and ongoing work within standards bodies to address these scenarios.

The growth of the IoT and building management systems (BMS) is another key factor. More building services are now based on IP connectivity including sensors, lighting, monitoring and control systems. This increases the number of connected devices and creates more distributed network architectures. As a result, standards continue to evolve to address pathway design, installation practices and system integration across these environments.

WORLD WIDE WEB

In global projects, alignment between different regional standards frameworks is also important. While requirements may vary by region, the underlying principles of performance, safety and interoperability remain consistent. Standards provide the structure needed to deliver consistency across multiple sites and geographies.



Although standards evolve, they do not change quickly. The purpose of a standard is to define requirements that are stable and reliable over time. To achieve this, the development process must be based on proven technologies and real deployment experience.

As an active contributor to industry standards development, Siemon sees firsthand how this process is shaped by collaboration between manufacturers,

consultants and end users. Standards must distinguish between long-term technology developments and short-term trends. They should not respond to every new product or market claim but instead focus on technologies that have been validated through practical use and testing.

This approach means that standards development is slower than product development. However, it ensures that the requirements defined in the standards remain relevant over the long-term. Cabling infrastructure must operate reliably for many years, so its design cannot be based on short-term expectations.

AGE APPROPRIATE

When specifying copper cabling systems, meeting the requirements of the relevant standards is essential. However, it should not be the only objective. Systems designed to meet minimum compliance may meet performance requirements at the time of installation, but this does not guarantee long-term reliability.

All cabling systems are subject to ageing. Over time, performance can be affected by environmental conditions, installation quality and component characteristics. For this reason, it is important to consider performance margins during design.

Selecting high quality components and ensuring proper installation practices helps to maintain system performance over the full lifecycle of the infrastructure. This supports long-term reliability, scalability and business continuity.

Minimum compliance confirms that the system meets the defined requirements at the point of testing. However, it does not always provide the additional performance margin that may be needed for long-term flexibility, ageing, environmental variation and future application demands. A more important consideration is whether the system will continue to support future requirements as technologies and applications evolve.

DELIVERING THE GOODS

In a fast changing digital environment, standards provide the structure that allows networks to evolve without compromising reliability. They support interoperability, reduce risk and enable infrastructure to deliver consistent performance over time. ■

NIKOLAY EFIMOV

Nikolay Efimov is technical manager for UK and Ireland and Central Asia at Siemon, supporting customers and partners across data centre and smart building projects. With extensive experience in structured cabling and network infrastructure, he works closely with organisations to deliver high performance, future ready connectivity solutions aligned with evolving industry standards and technologies.

Excel Networking Solutions

Performance without compromise: The Excel copper solution

Excel's copper solutions are built for performance, reliability and flexibility, and deliver a complete end to end solution for today's demanding networks. Combining category rated performance, independent third-party verification and a comprehensive product range, it's designed to support everything from small business installations to enterprise requirements – without compromise.

With options across multiple categories, full Construction Products Regulation (CPR) compliance and a 25-year warranty when installed by an accredited partner, Excel gives you complete confidence in every deployment and offers a huge choice of components to suit your specific requirements.

From cables and patch panels to connectivity and cable management, every component works seamlessly together to ensure consistent, high performance results. Where installation time is tight, our Config Services provide pre-terminated copper solutions to your exact specification requirements.

CLICK HERE to visit the new Excel website and find out more.
www.excel-networking.com

Siemon

Siemon's In-Line Connector offers quick, reliable high performance field terminations for custom length direct connections to wireless access points, security cameras and other IP-based and power over Ethernet (PoE) enabled devices deployed in today's smart building networks.

Designed to address space constraints at device ports, it enables direct connect modular plug terminated link (MPTL) deployments and does this while maintaining full Category 6A performance. Supporting 23-24AWG solid and 24-28AWG stranded cables across shielded and UTP channels, the In-Line Connector integrates seamlessly into high performance horizontal cabling and facilitates cable transition from indoor to outdoor environments.

Engineered to withstand higher operating temperatures, the In-Line Connector incorporates PowerGUARD+ technology, delivering long-term performance and reliable support of data and PoE across the building and campus. It is a streamlined, installation ready solution for demanding smart building applications.

CLICK HERE to find out more.
www.siemon.com

TREND Networks

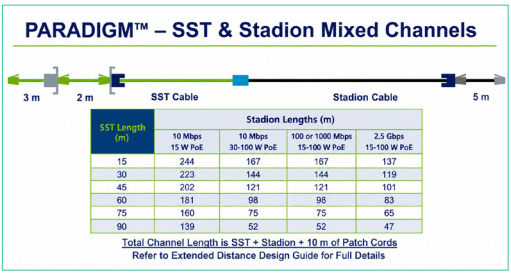
As demand for faster, more reliable connectivity continues to grow, copper cabling remains fundamental to enterprise and commercial networks. TREND Networks is supporting installers, integrators and IT teams with advanced copper cable testing and certification solutions designed for today's high performance environments.

Products including the LanTEK IV Cable Certifier, SignalTEK 10G Transmission Tester and SignalTEK QT Qualifier enable engineers to certify, troubleshoot and validate copper network installations quickly and accurately. Designed to support Gigabit Ethernet and 10 Gigabit Ethernet applications, power over Ethernet (PoE) and increasing data traffic demands, these tools help reduce downtime whilst ensuring compliance with industry standards. Reporting and project management via TREND AnyWARE Cloud also enables teams to securely store, analyse and share test results remotely for greater operational efficiency.

From office developments and education campuses to industrial and public sector projects, accurate testing is essential. By combining ease of use with professional grade diagnostics, TREND Networks continues to support organisations investing in future ready connectivity infrastructure.

CLICK HERE to find out more.
www.trend-networks.com

Comms Centre



SST Length (m)	Stadion Lengths (m)			
	10 Mbps 15 W PoE	10 Mbps 30-100 W PoE	100 or 1000 Mbps 15-100 W PoE	2.5 Gbps 15-100 W PoE
15	244	167	167	137
30	223	144	144	119
45	202	121	121	101
60	181	98	98	83
75	160	75	75	65
90	139	52	52	47

Total Channel Length is SST + Stadion + 10 m of Patch Cords
Refer to Extended Distance Design Guide for Full Details

Leviton understands that in many environments distances greater than 100m are required and often with the higher powered versions of power over Ethernet (PoE), such as Type 4.

Leviton's Stadion Category 6 OSP Extended Distance Cable, featuring 22AWG conductors, delivers exceptional reach for outdoor and demanding applications. It supports PoE Type 4 at distances up to 200m for 1000BASE-T and 165m for 2.5GBASE-T. For standard indoor infrastructures, Leviton's global cabling systems utilising 23AWG cable support PoE Type 4 up to 140m for 1000BASE-T and 110m for 2.5GBASE-T – reducing the need for additional switching equipment.

Leviton's PARADIGM system also supports channels comprising both indoor (ISP) and outdoor (OSP) cables. The table shows the available distances when combining SST (ISP) and Stadion (OSP) cables, offering flexible, optimised designs.

Comms Centre and Leviton have a longstanding partnership that demonstrates success and expertise in every project. Our technical team can assist with the design, supply and execution of your connectivity.

CLICK HERE to find out more, call 01634 291191 or to send an email **CLICK HERE.**
www.commscentre.com

The long and short of it

When it comes to extended distance cabling, R&M's Matthias Gerber argues against short-term thinking

Application specific cabling for copper links beyond 100m seems to have become a lively talking point. In some countries, it is being presented as something of a breakthrough and a practical answer to smart buildings, industrial edge devices and remote endpoints that sit outside the traditional reach of structured copper cabling.

QUESTION MARK

Of course, the subject is genuinely important. The Telecommunications Industry Association (TIA) has stated that its work around TSB-5073 is aimed at longer reach applications, with the goal of supporting 'reliable performance and interoperability beyond traditional cabling distances'.

However, a legitimate technical discussion can soon turn into a sales narrative that dismisses generic cabling itself. This is something the industry needs to be wary of. A need for additional reach in some scenarios does not automatically justify replacing generic, standards based infrastructure with application specific solutions. Nor does it mean that 30 years of structured cabling best practice should be suddenly cast aside because selected current use cases happen to strain a familiar design limit.

The question is not whether some devices can be connected over longer copper distances. Instead, the real question is whether building owners should trade long-term flexibility for a short-term approach that is perhaps being suggested by vendors who might not be completely impartial.

GOING THE DISTANCE

Generic cabling has endured for a reason – it separates the infrastructure from the application cycle. That separation is a foundation of modern communications networks.

Cabling lasts far longer than the active equipment it connects. Switches, endpoints, wireless systems, control platforms and automation protocols all change far more quickly

> 'Extended distance copper may prove useful in some situations and standards may yet provide sensible guidance for it. Even so, the industry should be wary of turning a developing niche into a new orthodoxy.'

and frequently than the physical layer embedded in walls, ceilings and risers. Once infrastructure becomes too closely tied to the needs of a single application, a single service model or a single vendor proposition, it may become much harder to adapt the building when needs change.

That is precisely why generic cabling has been such a durable success. It gives short-term and long-term options and supports interoperability. It allows the network to evolve without requiring the building fabric to be redesigned every time the market gets excited about a new class of endpoint.

RISKY BUSINESS

Ideally, cabling and connectivity products should be application neutral and capable of handling current and future transmission protocols. If cabling is genuinely generic, then the building owner retains freedom of choice – freedom to change systems, to change suppliers, to add new services and to migrate technologies without having to undo earlier physical layer decisions. In that sense, the current enthusiasm for overlength, application specific copper links risks moving the market backwards rather than forwards.

That point becomes even clearer in the context of smart buildings. Smart buildings are often used as the headline justification for extended distance copper because modern projects include more cameras, sensors, controllers, wireless access points and IP-connected devices than ever before.

However, smart buildings do not benefit from fragmentation, they benefit from convergence. A smart building always needs a universal, application neutral network and an open, shared protocol. If intelligent buildings are meant to become more integrated over time, then the underlying infrastructure should become more universal, not more bespoke. A patchwork of specially justified exceptions may solve immediate placement problems, but it can also make future integration, management and upgrades more difficult.

REASON FOR BEING

This is also why lifecycle thinking matters more than installation convenience. The market pitch for extended copper reach sounds practical – avoid another telecommunications room, reduce materials, simplify deployment, get power and data to a distant endpoint with less effort.

In some cases, that argument will be attractive but structured cabling is not judged only by the speed with which it solves this year's problem. It must be judged by how well it serves a building over years of change.

Future proofing is not a slogan – it is the reason generic cabling exists. Building owners invest in structured infrastructure because they expect multiple generations of applications to run over it. If a design choice narrows those future options, then any short-term savings need to be weighed very carefully indeed.

MEETING THE NEED

This doesn't mean that the standards community should ignore the pressure for longer reach links. On the contrary, standards bodies are doing exactly what they should do – examining use cases and trying to bring discipline to a developing area before hype gets too far ahead of engineering.

The TIA is working on a white paper that provides a high level overview of the technical considerations, use cases and performance expectations. The TIA TR-42.7 Engineering Committee on Telecommunications Copper Cabling Systems has issued a call for interest for document TIA-TSB-5073 – initially titled Guidelines for Supporting Extended Distance over 4-pair Balanced Twisted-Pair Cabling. That would indicate that it's still early days and there's no definitive industry position on the topic yet.

In fact, the emerging standards picture points in the opposite direction. Rather than abandoning generic infrastructure, the industry is trying to extend and refine it. Single Pair Ethernet, because of its application specific nature will probably not replace generic cabling. New media, new topologies and new application zones will certainly appear and some will be highly effective in defined roles.

The role of such solutions is not necessarily to replace the generic model. More often, it is to complement it at the edge, within a wider standards based architecture. That distinction matters. It is one thing to adopt a specialised solution

where the application truly demands it but quite another to use those edge cases as an argument against the value of generic cabling as the default design philosophy.

TAKING AIM

At the moment most extended length offerings are aimed at Cat.6 installations. That is acceptable, since many of the applications connected over extended reach would be IoT devices with relatively low bandwidth requirements.

However, the requirements for a 'normal' Cat.6A or 10Gb/s installation have not changed. Therefore, the planner must decide whether to use a mixed cable type installation or to choose an extended reach solution that also offers Cat.6A support for normal lengths, such as a 22AWG S/FTP installation cable. Simply installing today's extended reach cables in Cat.6 everywhere will not do the trick.

The right response to the extended distance debate shouldn't be denial but there's also no need to overreact. The industry should acknowledge that there are real scenarios in which the 100m assumption is under pressure and should welcome careful, open standards work. It should test claims rigorously and define performance expectations honestly but also resist the idea that every new reach problem demands a new class of application specific infrastructure. That would be a poor trade – long-term flexibility surrendered for short-term fashion.

LEARNING CURVE

Generic cabling has succeeded because it is bigger than the application of the moment. It supports interoperability in a world where devices, protocols and service models never stand still. Extended distance copper may prove useful in some situations and standards may yet provide sensible guidance for it. Even so, the industry should be wary of turning a developing niche into a new orthodoxy. The smarter course is to preserve generic cabling as the foundation and treat application specific extensions as exceptions to be justified, not as a reason to throw proven best practice overboard. ■

MATTHIAS GERBER

Matthias Gerber is market manager office cabling at R&M and has worked in the cabling business in various positions within the company for over 20 years. He has ample experience in the development and marketing of cabling systems and RJ-45 connectors. In addition, Gerber is a participating or past member of various standardisation bodies (IEC, ISO/IEC and TIA) as well as being chairman of the Swiss National Mirror Committee for TC48.

Fuelling data centres in 2026 and beyond

In this month's Knowledge Bank, where tech is demystified, Carrie Goetz looks at the various da

Data centre power consumption is a prime topic of conversation amongst operators, power companies, occupants and community activists. The not in my back yard (NIMBY) crowd touts increasing power costs and land use when a data centre permit arrives but are these concerns justified? Does a data centre automatically waylay the power grid?

THREE OF A KIND

To begin, let's look at the power options. In a prior Knowledge Bank, we discussed the three pillars of a data centre – power, cooling and compute. On the power side, we have multiple options for the source of primary and secondary power. The most common source of power in the US is natural gas. For Europe, renewables lead the charge. In Asia, coal is the predominant source.

To understand power sourcing concerns, a few factors arise – land use, additional supporting land, spent materials, carbon footprint, battery requirements and costs are the most predominant. For smaller facilities, land use isn't as much of a concern. If one looks to build a larger facility, the numbers are telling. When selecting site locations, the source of power generation directly impacts the footprint of the proposed site.

It's important to note that several of the top hyperscalers and AI companies have signed a pledge to generate their own on-site power to help alleviate residents' concerns. However, the land use to do so is now under scrutiny. Land availability will, similarly, govern the power source selected.

PICTURE PERFECT

If we compare the size needed for each type of power plant to support a 1GW/h data centre, we have the graphic below. Information sources include NREL, Our

POWER SOURCE	LAND USE FOR 1 GW INSTALLED (ACRES)	USEFUL LIFE OF COMPONENTS (YEA
Nuclear (Large Traditional)	800 – 1,300	60 – 80+
Small Modular Reactors (SMRs)	35 – 100	60 (extendable to 80–1
Natural Gas (CCGT)	~10 – 20	30 – 40
Coal	~10 – 30	40 – 50
Utility Solar PV (ground-mounted)	5,000 – 8,000	25 – 30
Rooftop Solar	~0 – 500 (near zero new land)	25 – 30 (panels); 10 – 15 (inverters)
Onshore Wind (full project area)	30,000 – 70,000	20 – 25
Onshore Wind (direct footprint only)	1,000 – 2,000	20 – 25
Offshore Wind	0 acres (ocean-based)	20 – 30 (extensions to 35 possible)

ta centre power options

World in Data, PLOS ONE (Lovering et al. 2022), US Department of Energy, recent 2023-2025 industry analyses and manufacturer recommendations.

For renewables, battery banks are mandatory to furnish stored power during lack of environmental source performance such as no wind and no sun. That said, some data centres will likely use batteries as well, but the battery storage parameters and charge/discharge cycles vary.

Recycling and afterlife responsibilities matter, regardless of the power source. Where do spent components go? For instance, wind turbine blades measure 350ft. They won't fit in a trash bin. What percentage is recyclable versus landfill? Add batteries to spent components, if used.

RS)	BATTERIES REQUIRED (FOR FIRM/DISPATCHABLE POWER)	NOTES
	None / Minimal	True baseload; very high energy density. Typically not site specific and shared with surrounding consumers.
00)	None / Minimal	Much smaller footprint; factory-built; excellent for co-location near data centers or industrial sites. 8-10 year fuel recycling. Spent fuel needs secure storage.
	None / Minimal	Fast-ramping, highly dispatchable; compact plant. Carbon can be captured or sequestered. Pads can be collocated to facilities.
	None / Minimal	Includes plant site (mining footprint is separate and large over time)
	Very High (6 – 12+ hours typical)	Intermittent; needs large-scale storage for reliability. Not suited to all areas without modification. Spent panels need recycling.
	High (usually paired with on-site batteries)	Uses existing rooftops; minimal additional land impact
	High (4 – 12+ hours typical)	95%+ of land remains usable for farming/grazing. Spent blades and equipment burial needed.
	High	Only turbine pads + roads; spacing is the big factor. Room for 350: spent turbine burial is needed.
	High to Very High (4 – 12+ hours; sometimes paired with storage/ hydrogen)	No terrestrial land use; marine corrosion and seabed impacts apply. Marine health is a consideration.

SITE SELECTION

Cost of land clearly matters. Land use restrictions, permitting, local requirements, codes and access to resources limit selection. For capital equipment, the product derived from dividing the useful lifecycle into the total (operating + capital costs + install costs + recycling + permitting + expendables + maintenance) is only a part of the consideration equation today.

Environmental, social and governance (ESG) targets, tax incentives, time to market, latency, location of other facilities, government mandates, recycling responsibilities and wide variety of other factors come into play. Community stewardship and local relationships are also moving up the site selection list.

THINKING AHEAD

We are learning more about power sources and sustainability. Thoughts are changing on carbon and innovators can capture and sequester emitted carbons for clean power generation using natural gas. Local generation removes the attenuated losses that result from long distance transmission, meaning more of the generated power is available for use. ■

Quick clicks

Your one click guide to the very best industry events, webinars, electronic literature, white papers, blogs and videos

The Rise Of Direct To Chip Cooling As A Top AI Cooling System is a blog by Christopher Leonard of **Schneider Electric.**
CLICK HERE to read it.

Land. Power. Compute is an industry report from **CUDO Compute** that examines how AI is scaling faster than infrastructure can support it.
CLICK HERE to request a copy.

EPI has published its EPI Data Center Survey Report 2026, based on insights from data centre professionals across global markets.
CLICK HERE to download a copy.

Addressing Polarity Challenges in Data Centers is a detailed guide from Molex **Connected Enterprise Solutions** on how to manage polarity challenges across various common connection types including patch cord and array connections. **CLICK HERE** to download a copy.

NTT Data's 2026 Global AI Report shows that companies are being forced to rethink where data lives, where AI runs and how systems are governed.
CLICK HERE to request a copy.

Architecting AI At Scale: From Training Clusters To Inference-Driven Infrastructure is white paper from **AFL.**
CLICK HERE to download a copy.

Unlocking AI Potential Through Seamless Data Center Connectivity is a blog by Ryan Harris of **Siemon.**
CLICK HERE to read it.

Flex appeal

Matthew Baynes of Schneider Electric examines how data centres can strengthen the UK energy future

The UK data centre market has never been more in demand and it has also never been more constrained. Recent investment from hyperscalers, alongside the Government's AI Opportunities Action Plan, signals ambition to position the UK as a global AI leader. As Jensen Huang has highlighted, the UK is one of the world's most advanced AI ecosystems, yet one still working to scale the infrastructure required to support it.

TAKING THE STRAIN

Energy demand is accelerating, driven by electrification, digital services and AI. At the same time, the shift to renewables is introducing new variability into how power is generated and consumed. The result is a system under growing strain, with data centres at the centre.

The consequences are emerging. The recent pause of OpenAI's Stargate project reinforces a vital point – reliable, flexible power is now a precondition for digital infrastructure, not an afterthought. But that pressure also presents an opportunity to rethink not just how data centres consume energy, but how they can strengthen the grid around them.

UNDER PRESSURE

The UK faces a dual challenge – demand is rising while supply is becoming harder to predict. The IEA reports that data centres account for around 1.5 per cent of global electricity consumption, a figure set to climb to three per cent by 2030 as AI, analytics and cloud services expand.

The UK's ambition to scale AI capability is supported by both public and private investment and will only intensify pressure on energy infrastructure. In Ireland, according to the country's Large Energy User Action Plan (LEAP) report, data centres already account for 22 per cent of national electricity consumption. The direction of travel is unmistakable.

At the same time, the energy mix is evolving. Renewable energy is central to decarbonisation but its intermittency introduces volatility that must be managed in real time. That balance is no longer theoretical, but the power management reality operators face every day.

THINK AGAIN

For most of their history, data centres were designed around one imperative – stay on. Draw power from the grid, back it up and maintain uptime. That model is no longer sufficient.

As digital infrastructure increasingly underpins healthcare, finance, public services and everyday life, these facilities have become established as critical national infrastructure. That status brings both responsibility and opportunity.

What's emerging is a new approach, one that positions data centres as active nodes within the power system, rather than passive loads upon it. An example is emerging in Argyll, Scotland, where the proposed Killellan AI Growth Zone is repurposing a former industrial site into a large scale data centre campus.

The development is targeting 100MW-600MW in its first phase – scaling to 2GW – and is designed to operate using a mix

of on-site renewable energy supported by advanced storage. At its core is a microgrid model, enabling energy to be managed and optimised across a wider network of distributed infrastructure. It is an ambitious blueprint, but it shows that data centres are evolving from energy consumers into integrated energy hubs. The question then becomes – how does that shift work in practice?

MAKING IT POSSIBLE

Flexibility is the mechanism that makes the transition to integrated energy hubs possible. In practice, it means responsiveness. Data centres that can modulate their energy consumption in line with grid conditions by reducing load during peak demand or aligning workloads with renewable generation become assets to the wider system, not just to their own operations.

Energy storage is crucial to making flexibility work in practice, with behind the meter battery systems providing the means to deliver it. These systems allow operators to actively manage when and how energy is used by storing surplus power, deploying it at peak times and, where appropriate, exporting it back to the grid.

This enables data centres to respond to grid conditions in real time, strengthening resilience, reducing reliance on diesel and unlocking participation in grid services. Simultaneously, alternative fuels are evolving, such as hydrotreated vegetable oil (HVO), as a lower carbon substitute for traditional diesel.

SEEING IS BELIEVING

Underpinning this transition is a new generation of integrated, intelligent energy management platforms. Historically, power, cooling and building systems have operated in silos, limiting visibility and coordination. In increasingly complex environments, that fragmentation creates inefficiencies and operational risk.

By unifying these systems within a single, intelligent layer, operators can gain real time insight, anticipate issues and optimise performance. This is where flexibility becomes operational and where facilities begin to interact dynamically with the grid, strengthening it in real time.

SHARE AND SHARE ALIKE

As facilities become more integrated into energy systems, the role of energy itself is being redefined from a fixed cost into a shared asset. Heat reuse provides a clear illustration. At Queen Mary University of London, a modernised data centre captures excess heat and repurposes it to generate high temperature water, demonstrating how digital infrastructure can deliver tangible value beyond its core function.

Across Europe, this approach is gaining momentum. According to the EUDCA's 2025 State of European Data Centres Report, 31 per cent of colocation and hyperscale facilities in Europe already have heat coupling capability, with 38 per cent investing in it.

Examples such as these show the structural shift in how energy can be managed. Rather than a one-way flow into a facility, energy becomes something that can be stored, reused and redistributed across local systems. When combined with demand response and energy storage, this creates a different model, one where facilities support grid stability, contribute

'By rethinkin
centres as f
integrated p
assets, the i
has an oppo
not just to r
to energy cl
but to build
that is resili
adaptive by

to local energy ecosystems and improve overall system efficiency.

In this context, data centres are no longer isolated infrastructure. Instead, they become active participants in a broader energy network, creating value for operators and strengthening the wider energy system and communities they are part of.

UNLOCKING POTENTIAL

None of this transformation happens by accident. It requires deliberate coordination between operators, utilities and policymakers. Unlocking the potential of flexible infrastructure depends on designing systems with flexibility in mind from the outset. Early engagement with grid operators can accelerate connections, support renewable integration and enable more effective long-term planning.

As the UK looks to scale its digital economy, this level of coordination becomes a strategic must. If projects like Stargate are pausing due to power constraints the answer is not to slow ambition but to build more integrated energy and digital infrastructure capable of strengthening the grid as demand grows. The technology is already proven and the commercial models are maturing, so what matters now is how quickly the industry moves to deploy them at scale. The issue is no longer whether the grid must adapt, but how quickly we can make it happen.

g data
lexible,
power
ndustry
rtunity
espond
hallenges
a grid
ent and
design.'

ENERGY OPPORTUNITY

Power is no longer a secondary consideration in digital infrastructure strategy – it is the defining factor. By rethinking data centres as flexible, integrated power assets, the industry has an opportunity not just to respond to energy challenges but to build a grid that is resilient and adaptive by design. The future of the UK's energy system will be defined by how effectively digital growth and power innovation are aligned and data centres sit at the centre of that equation. The opportunity now is not just to keep up with demand but to redefine how the UK powers its digital future. ■

MATTHEW BAYNES

Matthew Baynes is vice president for Schneider Electric's Secure Power and Data Centre Division in the UK and Ireland. With over 20 years' experience across the data centre, IT and critical power industries, Baynes works closely with Schneider Electric's customer and partner ecosystems to support the design, build and operation of next generation, sustainable, AI infrastructure.

Keeping a lid on it

Errol Bull of Momentive Performance Materials explains why data centre energy management starts at the roof

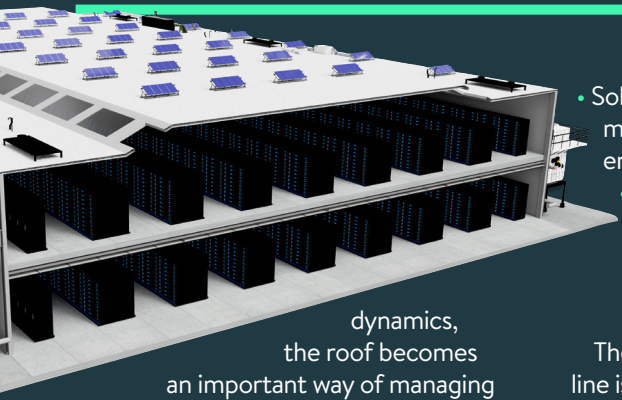
Step inside any modern data centre and the conversation surrounding energy management is almost entirely dominated by what happens within the facility's walls. Facility managers and engineers will happily debate the merits of rack density, chip efficiency and the complex migration to liquid cooling loops. This internal focus is understandable, after all, the high performance servers inside are the engines that generate revenue and drive the digital economy.

TRUE COST OF COOLING

The internal focus on the servers often overlooks a highly influential component of the energy equation – the building envelope and, more specifically, the roof. The data centre roof is often simply seen as a passive lid, designed to keep the rain out. Yet, when it comes to optimising Power Usage Effectiveness (PUE) and managing long-term energy costs, the roof is the first line of defence. By reflecting heat and protecting the tightly controlled internal environment, the roof is a valuable way to help maximise energy efficiency.

To understand why the roof is so important to energy efficiency, you must first examine data centre operating expenses. Cooling the immense heat generated by server halls accounts for approximately 40 per cent of a data centre's total energy consumption – a figure that can fluctuate depending on the facility's age and location. When you view the building through the lens of thermal

‘Industry estimates indicate that converting a traditional roof to a white, reflective roof can reduce peak cooling energy costs by 10-50 per cent, depending on the local climate and existing insulation levels.’



dynamics, the roof becomes an important way of managing energy efficiency, thanks to relatively straightforward thermodynamic principles.

Traditional dark roofing materials, such as bitumen or single-ply membranes, act as heat sinks. They absorb solar radiation throughout the day, converting it into thermal energy that’s transferred into the building structure. During the height of summer, a black roof can be up to 50°C hotter than the surrounding air. This immense heat load forces heating, ventilation and air conditioning (HVAC) systems to work considerably harder and consume more electricity to maintain the strict thermal envelopes required by modern servers.

PHYSICAL FITNESS

The solution lies in shifting the roof’s primary thermal function from heat absorption to heat reflection. This is where high performance white roof coatings, particularly high solids silicone, are altering the operational baseline for data centres. A high quality, white silicone coating has a high solar reflectance index (SRI), which has two energy efficiency advantages:

- Solar reflectance. It acts as an efficient mirror, bouncing most of the sun’s energy back into the atmosphere.
- Thermal emittance. It efficiently releases absorbed residual heat rather than retaining it within the building mass.

The impact on a data centre’s bottom line is immediate. Industry estimates indicate that converting a traditional roof to a white, reflective roof can reduce peak cooling energy costs by 10-50 per cent, depending on the local climate and existing insulation levels. In real world terms, this translates to a direct 7-15 per cent reduction in total annual cooling costs. In an industry where margins are tight and energy grids are increasingly constrained, those percentages represent operational savings and a step towards corporate net-zero goals.

WHY SILICONE?

One sensible question to ask is, are all white reflective roofs the same? The answer lies in chemical resilience and longevity.

Data centres are designed to operate continuously for decades. Organic coatings, such as acrylics or polyurethanes, are carbon based. When subjected to the intense, relentless ultraviolet (UV) radiation found on a commercial rooftop, the carbon bonds in these materials eventually break down. This chemical process, known as photo-oxidation, causes the coating to weaken, break-up and lose its reflectivity.

As the coating physically degrades, the 'cool roof' effect diminishes and the building's thermal load creeps steadily back up.

Silicone, by contrast, is semi-inorganic. It is built upon a highly stable silicon-oxygen backbone – the same chemistry found in quartz and glass. This molecular structure makes silicone inherently resistant to UV degradation. A silicone coating applied today will maintain its flexibility and reflectivity for decades, provided it is cleaned regularly, creating a stable, long-term thermal barrier that performs year after year.

CASE IN POINT

The practical application of cool roof technology demonstrates how effective this strategy can be for maintaining uptime and improving efficiency. A major global technology infrastructure provider operating a data centre in Mexico – a region characterised by extreme weather variance and high UV levels – faced a critical infrastructure issue.

The facility's sprawling 15,793m² single-ply PVC waterproofing system was failing, despite being only six years old. Relentless UV exposure had embrittled the membrane, while a severe hailstorm had caused physical damage, ultimately compromising the building envelope. The operators faced a difficult choice – either a complete roof tear-off and replacement or applying a restorative coating.

For a data centre, a roof tear-off is a nightmare scenario. It's time-consuming, disruptive, noisy and creates vast amounts of dust and debris – all sworn enemies of precision server electronics. Plus, removing the existing roof leaves the mission critical server halls directly exposed to potential water leaks during construction.

Instead, the facility operators opted for a restorative, non-invasive approach, utilising a high performance, liquid applied, 100 per cent alkoxy silicone roof coating. The liquid application immediately created a seamless, monolithic barrier, waterproofing the facility within hours. Crucially for the facility's energy strategy, the white finish restored the roof's high solar reflectivity. The site secured its envelope and restored its optimal PUE without incurring the massive capital expenditure or the operational risk of a traditional roof replacement.

ALIGNING THE ENVELOPE

As power grids become increasingly stressed, data centres are adopting on-site renewable generation to ensure operational stability. Rooftop photovoltaic (PV) solar arrays are quickly becoming an industry standard, but they introduce a 'lifecycle gap' that is frequently overlooked

during the specification phase.

Solar panels are typically engineered with a service life of 25 years or more. Conversely, standard commercial roofing membranes often require major maintenance, or even complete replacement, every 7-10 years. This mismatch creates a significant logistical and financial headache – facility managers may be forced to decommission and remove a perfectly functioning solar array just to repair the degraded roof beneath it.

High performance silicone coatings can bridge this gap. Because they do not chalk or degrade under UV light, they offer a functional lifespan that closely matches solar panels. Furthermore, silicone retains its elasticity, allowing it to easily absorb thermal expansion and contraction, as well as mechanical stress, exerted by heavy solar racking systems without losing its waterproof bond. By aligning the roof's lifespan with that of the energy generation assets, operators can secure a low maintenance, long-term energy strategy.

RESILIENT INFRASTRUCTURE

While lowering PUE and reducing cooling costs are the headline benefits, the roof still has one other major role – keeping water out. Liquid applied silicone eliminates the common failure points like mechanical fasteners, seams and joints. It quickly cures into a single, seamless membrane that locks out water, and even ponding water, which is a common concern on flat data centre roofing.

In an era where data centre capacity is being built at record speeds, there is a temptation to prioritise the speed of construction over long-term material performance. However, as environmental reporting becomes mandatory and energy costs climb, every bit of efficiency matters.

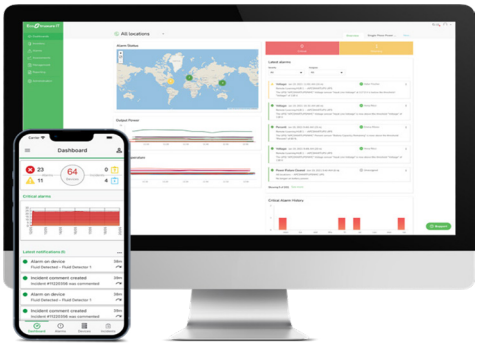
MORE THAN MEETS THE EYE

The roof is much more than just a lid over the servers – it is an active, vital component of the building's energy management system. By specifying reflective, seamless silicone roof coatings, data centre operators can effectively lock-in decades of thermal performance and improved energy efficiency. ■

ERROL BULL

Errol Bull is an application development leader at Momentive Performance Materials. With over 25 years of global experience in construction sealants, adhesives and coatings, Bull is an expert in structural glazing and sealant performance.

Schneider Electric



Schneider Electric has model based automated sustainability reporting features within its EcoStruxure IT data centre infrastructure management (DCIM) software.

Available to all EcoStruxure IT users, the enhanced reporting features combine sustainability, regulatory, data centre and software development expertise with advanced machine learning. Users have access to a set of reporting capabilities, which traditionally required a deep understanding of manual data calculation methods.

EcoStruxure IT is a fast, intuitive and simple to use reporting engine to help meet regulatory requirements including the European Energy Efficiency Directive (EED). With the download function, organisations can quickly quantify and report at the click of a button – making it faster and easier to harness the power of data to reduce the environmental impact of their data centres.

CLICK HERE to find out more.
www.se.com

Panduit

Panduit's EL2P intelligent power distribution unit (iPDU) is engineered to redefine power management in mission critical data centre environments. It targets one of the sector's toughest challenges – maintaining uptime while optimising capacity and sustainability at scale.

The EL2P offers high precision metering accuracy of ±0.5 per cent. It also delivers granular energy consumption data to support effective capacity planning, Power Usage Effectiveness (PUE) optimisation and sustainability initiatives.

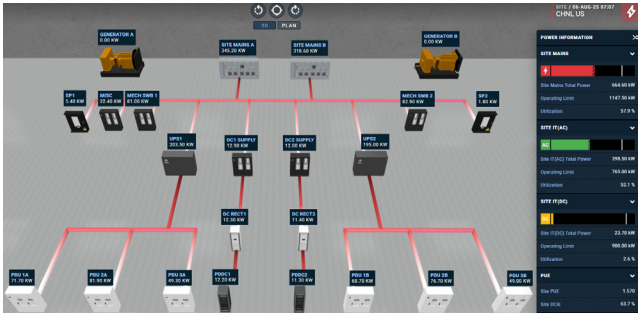
Flexibility is another key differentiator. Panduit's 4-in-1 outlet design allows each outlet to function as C13, C15, C19 or C21, simplifying deployment and supporting diverse IT loads. Dual Gigabit Ethernet connectivity with daisy-chain support for up to 64 iPDUs on a single IP address further reduces complexity.

Native Cisco Nexus Dashboard integration provides visibility into energy usage and sustainability metrics, while Redfish and RESTful APIs ensure interoperability with DCIM and cloud platforms. Secure zero-touch provisioning (sZTP) enables rapid, low touch deployment across distributed sites.

Available in single-phase and three-phase models from 5-43.5kVA for EMEA, with dual rated approvals, the EL2P combines global compliance with practical deployment.

To find out more **CLICK HERE.**
www.panduit.com

EkkoSense



EkkoSoft Critical from EkkoSense delivers AI-driven power monitoring for data centres, providing real-time visibility into power consumption, capacity and operational risk across the entire estate. By transforming raw electrical data into actionable insight, the platform enables data centre teams to make faster, more informed decisions that improve resilience, efficiency and planning accuracy.

Designed to take power monitoring beyond traditional building management system (BMS) capabilities, EkkoSoft Critical offers advanced features including 3D mechanical and electrical (M&E) one-line visualisations, detailed three-phase power analysis and real-time infrastructure visibility to help identify overloads, stranded capacity and misallocated loads before they become critical issues.

The platform also delivers automated real-time Power Usage Effectiveness (PUE) tracking and intelligent infrastructure alerting, giving operations teams immediate access to the critical data needed to optimise performance, reduce risk and support future growth.

To find out more **CLICK HERE.**
www.ekkosense.com

High time

Louis Charlton of Global Commissioning tells us why the substation is no longer someone else's problem

For most of the data centre industry's history, the substation was infrastructure that existed before the project began. It was delivered by the utility, managed by the distribution network operator (DNO) and treated as an external dependency rather than an internal asset. The project boundary started at the low voltage (LV) switchboard and everything upstream was someone else's responsibility. That model is breaking down.

DRIVING FORCE

AI infrastructure's power demands, grid connection timelines and the commercial imperative to control energy strategy are driving a fundamental shift in substation ownership. Operators are increasingly procuring, building and, in some cases, operating their own high voltage (HV) infrastructure. And with that ownership comes a set of assurance responsibilities that the industry is still learning to manage.

The shift toward operator owned substations is not primarily driven by preference – it is driven by constraint. Grid connection timelines in many European markets now average 7-10 years, with some extending further. In parts of North America, large scale connections can face delays of up to 13 years.

Those wait times are fundamentally incompatible with the speed at which the industry needs to move. When an operator needs to secure access to hundreds of MW of power within 18 months and the grid timeline extends years beyond that, the response has been to bring the power infrastructure within the project boundary.

FORM AND FUNCTION

That response takes various forms – private substations, behind the meter generation, battery energy storage systems and hybrid configurations that combine grid, generation and storage assets on a single campus. Each of these approaches moves HV infrastructure from external dependency to internal asset. And each requires assurance capability that the traditional commissioning model was not designed to address.

Choosing to build a substation is not the same as understanding how it works. Many data centre operators and their delivery partners have deep expertise in IT infrastructure, mechanical systems and LV distribution but HV power systems sit outside that traditional competence. Protection coordination, grid interface compliance, transformer commissioning, switchgear verification and safety management systems all require specific technical knowledge and rigorous assurance processes.

When operators take control of HV assets without a corresponding assurance framework, they are also taking on significant risk. Incorrectly commissioned protection schemes, inadequately verified switchgear or poorly coordinated grid interfaces can result in catastrophic failure. Unlike an internal systems failure, the consequences extend beyond the data

centre to the grid itself. Regulators and network operators are acutely aware of this risk, which is why oversight requirements for private HV infrastructure are tightening across multiple jurisdictions.

POLICY DOCUMENT

In the US, the Trump administration has explicitly told major technology companies to build their own power generation rather than rely on an ageing grid. The sector is already embracing this new paradigm, with research from Cleanview identifying 46 US data centre projects representing 56GW of planned behind the meter generation, with 90 per cent of those projects announced in 2025 alone.

In the UK, the government's AI Growth Zones programme is taking a different but equally significant approach. The November 2025 policy paper commits to working with Ofgem to enable data centre developers to build their own HV grid infrastructure rather than waiting for network operators to deliver connections. Four zones have already been designated and the government estimates that these interventions could reduce time to power data centre projects built within these zones by as much as five years.

These are not future proposals. They are current policy and they carry a clear implication – if operators are being encouraged, and in some cases directed, to own their power infrastructure, the assurance frameworks supporting this new kind of infrastructure buildout must be in place before the first transformer is energised.

PAYING ATTENTION

The insurance industry's approach to data centre risk is evolving in parallel with infrastructure complexity. As operators take ownership of generation and HV distribution assets, insurers are asking more detailed questions about commissioning quality, protection philosophy, maintenance strategy and operational competence. A data centre with a private substation carries a different risk profile from one

‘HV commissioning is a distinct discipline with its own standards, safety protocols, testing methodologies and competence requirements. It is not, as some operators may be tempted to believe, an extension of LV commissioning.’

connected to a utility managed grid supply and that risk profile comes with a new, justifiable increase in scrutiny.

Underwriters are recognising that the evidence supporting substation commissioning – the protection study verification, the switchgear test records and the grid compliance documentation – must be as rigorous as anything else in the commissioning process for a new facility. Commissioning evidence that stops at the LV switchboard is no longer sufficient to satisfy the risk assessment requirements of major insurance programmes.

Bringing HV power infrastructure inside the project boundaries is a decision made to smooth over pain points. If the commissioning of those HV assets is ineffectual, however, operators risk creating new headaches that are worse than the old ones.

DIFFERENT DISCIPLINE

HV commissioning is a distinct discipline with its own standards, safety protocols, testing methodologies and competence requirements. It is not, as some operators may be tempted to believe, an extension of LV commissioning. The equipment is different, the failure consequences are greater, the regulatory framework is more complex and the people who do the work require a separate subset of qualifications and experience.

That distinction is important because some commissioning providers attempt to cover HV scope with teams whose primary experience lies in LV and mechanical systems. That approach may satisfy a contractual line item but it does not deliver the kind of verification and assurance that HV infrastructure demands. Protection testing, transformer commissioning and grid interface verification require engineers who work in that environment regularly, understand the failure modes and can interpret results with confidence.

A STRUCTURAL SHIFT

Effective HV assurance does not begin at the point of commissioning. It begins at the design stage, when protection philosophy is defined, resilience requirements are established and the interface between the private HV infrastructure and the distribution network is agreed. If a commissioning perspective is absent from those early decisions, the assurance framework inherits constraints that are difficult and expensive to resolve later.

Operator ownership of HV

infrastructure is not a temporary response to grid constraints. It reflects a permanent change in how AI-scale data centres are powered. If the data centre industry is to meet the power and capacity demands of the AI boom, then it must take ownership of, and responsibility for, its own HV infrastructure.

Most importantly, it must do so responsibly with assurance and certification at heart of its approach, not treated as an afterthought. As campuses incorporate generation, storage and transmission alongside computing, the operational boundary of the data centre has expanded to include assets that were previously external to the project.

DELIVERING THE GOODS

Assurance models must expand alongside project scope and remit. Businesses that can provide integrated assurance across the full energy chain, from grid interface through HV distribution to the final point of utilisation, will be better positioned to support the infrastructure programmes that are now being planned and delivered. The businesses that remain configured for downstream verification will find that the scope they can credibly address is narrowing. That boundary has already moved – the question is whether the assurance model has moved with it. ■

LOUIS CHARLTON

Louis Charlton is group CEO of Global Commissioning. He leads the delivery of verified and certified commissioning services for major data centre owner operators and contractors, ensuring critical infrastructure performs safely, efficiently and exactly as intended. Charlton focuses on rigorous verification, performance assurance and accountability, positioning commissioning as the layer of certainty in complex, high risk environments.

Shank you very much!

The Inside_Networks 2026 Charity Golf Day took place at the prestigious Hanbury Manor PGA Championship Course, once again uniting the industry in support of Macmillan Cancer Support and raising vital funds for the charity

After several days of unsettled weather, we were hoping the rain would stay away from Hanbury Manor PGA Championship Course for the Inside_Networks 2026 Charity Golf Day. Our wishes were granted and on what was the 21st anniversary of this event, participants enjoyed a fun-filled, entertaining and laughter packed day, which raised an amazing £7,300 for Macmillan Cancer Support.

With main sponsorship provided by LMG, Excel Networking Solutions, RS Advisory Services, Onnec and Slice Golf & Events, 28 teams and 112 people took part. Teams from LMG, CommScope, Molex Connected Enterprise Solutions, RWL Advanced Solutions, ABB, Splice Group, Allied Telesis, Excel Networking Solutions, Mayflex, Netceed, Panduit, Inova, Corning, Networks Centre, Nscale, Edmundson Electrical, Wesco Anixter, 2bm, Data Tech Holdings, Leviton, Brexons, Onnec, Quay Consulting, Cable Management Supplies (CMS) and Aginode all gathered to battle it out.

The Team Competition saw Team Netceed 2 emerge victorious on 100 points, with runners-up in the shape of Team Wesco Anixter and Team Inova 1 both on 96 points. The Best Individual accolade went to Maurizio Patane of Team Inova 1, while winner of the Netceed sponsored Nearest the Pin competition was Martin Burke of Team Edmundson Electrical. This year it was the turn of Steve Jones of Team RWL Advanced Solutions to take the Netceed sponsored Longest Drive accolade.

PGA golf professional and director of golf for ACE Golf Challenge, Ady Wheatcroft, demonstrated a range of amazing trick shots. He also hosted the Fineline sponsored Beat The Pro competition on the 11th tee, where there were 17 winners. In the end, Tom Carroll of Team Onnec was drawn out of the hat as victor.

The traditional Inside_Networks Charity Golf Day prize of a golfing gnome is normally awarded to the individual with the lowest score. This year, however, India Culleton from Team LMG 2 was presented with it for being completely unaware of who Marc Bolan and T Rex were!

After a few drinks in the late afternoon sunshine, guests sat down to a three-course dinner followed by the prizegiving, auction and charity raffle. The generosity shown by both sponsors and attendees was remarkable, with the auction generating some spirited bidding. Sam Allen, Steve

Team Leviton retained their best dressed team title from last year

'Another superbly run event at Hanbury Manor with a great atmosphere throughout the day. From the golf to the dinner and networking, everything was first class and a credit to everyone involved.'
Mo Boolaky – Molex Connected Enterprise Solutions

It's all to play for!

'It was a fantastic day – well organised and attended and, more importantly, it raised lots of cash for an incredibly worthwhile charity helping those, like myself, who have been impacted by such a terrible illness.'
Mark Bonner – CommScope

Team Edmundson Electrical strike a pose

Team Aginode take a break

Team Molex are all smiles

'You can always guarantee this event will be well organised, highly entertaining and a fantastic opportunity to connect with great people. It's always a pleasure to hit the green when it's for Macmillan!'
James Krovina – Cable Management Supplies (CMS)

Melay, Freddy Briffitt, Paul Martin and Paul Bird were among those who walked away with some fantastic prizes including rounds at Woburn, Mannings Heath, Hanbury Manor and Centurion golf clubs, as well as a theatre trip and a signed Manchester United FC shirt.

'The Inside_Networks Charity Golf Day remains a standout event in the industry calendar,' said Rob Shepherd, editor of Inside_Networks. 'As always, the day offered a fantastic opportunity for every part of the industry to come together in some friendly competition. I'm once again immensely proud of the generosity shown across the sector and would like to thank all the players, sponsors and organisers for helping make the event such a success.'

Mark Cumberworth of Slice Golf & Events, added, 'A huge thank you to everyone who supported the event again this year. Thanks to your generosity, we have now raised well over £150,000 for Macmillan Cancer Support over the past 21 years.'

Liam DeRoe of Macmillan Cancer Support was in attendance and stated, 'More than three million people across the UK are currently living with cancer and Macmillan Cancer Support is committed to helping them live as fully as possible through practical, emotional and financial support. As an organisation that relies on public donations for 98 per cent of its funding, we are hugely thankful to everyone involved in the Inside_Networks 2026 Charity Golf Day for helping to raise essential funds for people affected by cancer and their families.'

'It's great to see this event still being so well supported after all these years. I came away with another reminder that from our darkest moments some good can come.'
Neal Silverstein – Specsavers

An opportunity to catch up with industry colleagues

'This is a really chilled out event where everyone working in the industry can come together. While we are all in competition with each other from a business perspective it is great to see how we join as one community for the day to support Macmillan.'
Steve Melay – Netceed

‘Another fantastic Inside_Networks Charity Golf Day – one of the standout events of the year, where people from across the industry come together to support an excellent cause.’
Ieuan Rowe – LMG

India Culleton from Team LMG 2 received this year’s golfing gnome

‘It was great to see everyone again. It’s become one of my yearly milestones!’
Tony Simmons – Leviton

Team Netceed 2 were deserving winners of the best team competition

‘Really well organised, a great atmosphere and a fantastic opportunity to spend time with peers, customers and partners whilst also raising money for such a good cause.’
Dan Webb – Allied Telesis

‘As always, the team put on a fantastic event, making sure Macmillan was at the heart of it. Our team had an enjoyable day at a wonderful location and we are looking forward to the next one.’
Mike Thompson – Edmundson Electrical

A big thanks to all the event sponsors:

LMG

excel without compromise.

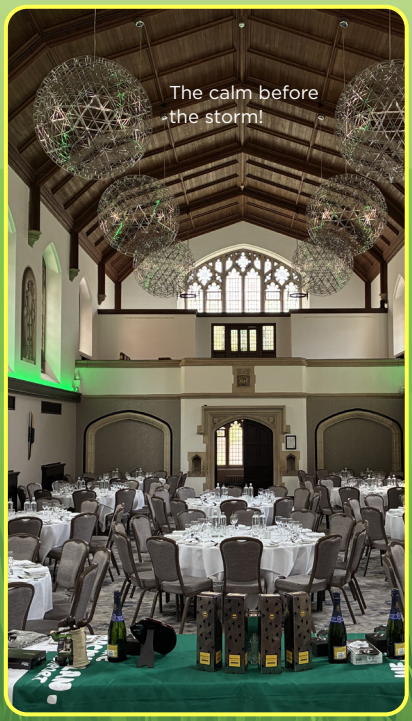
ONNEC

Steve Jones receives his longest drive prize from Steve Melay

Mark Cumberworth shows off this year's prizes

'The Onnec team had a fantastic day. Great food, great company and even better conversations made it a perfect chance to catch up with colleagues across the industry. Most importantly, it was all in support of the incredible work of Macmillan.'
Tom Carroll – Onnec

'To raise money for Macmillan whilst enjoying the splendour of Hanbury Manor makes for a very complete day. It's a very friendly atmosphere as customers, friends and colleagues gather to enjoy what is the best social networking event of the year.'
Barrie Powell – Aginode



The calm before the storm!

Deep Green and Zendo partner to power next generation AI data centres with clean energy

Deep Green has partnered with Zendo to power a new generation of small scale, AI-ready data centres with renewable energy and intelligent energy management. The partnership begins at Deep Green's flagship site in Urmston, where Zendo has procured a clean energy supply contract for the 400kW site.

The Urmston site is designed for high performance computing and AI workloads. It supports rack densities of up to 150kW, with excess heat from the servers captured and reused to warm Trafford Leisure Centre's swimming pool – saving it around £80,000 a year and reducing CO2 emissions.

This is part of Deep Green's model of locating distributed, modular data centres close to where heat energy can be used in local facilities such as swimming pools, district heating networks and public buildings. Deep Green's unique approach allows it to deploy new capacity in weeks rather than years. Through its partnership with Zendo, this is combined with a flexible energy strategy that scales in step with the facility's future compute demands, while maintaining a fully renewable power supply.

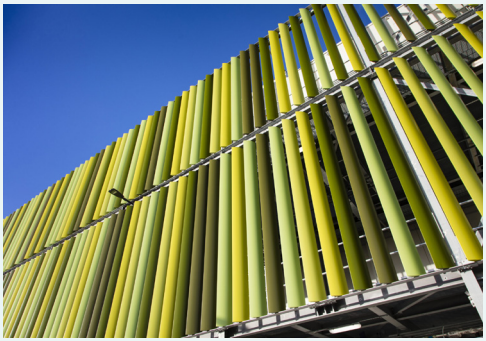
Legrand selected by Start Campus to deliver high efficiency cooling for Europe's largest AI data centre campus

Legrand has been chosen by Start Campus to deliver advanced high performance computing cooling solutions at its hyperscale campus in Sines, Portugal. The project supports the development of Start Campus's 1.2GW facility, designed to meet the growing demand for AI, cloud computing and high performance workloads across Europe.

As part of the project, Start Campus selected Legrand and its specialist cooling brand, USystems, to deploy ColdLogik rear door heat exchanger (RDHx) technology. This enables highly efficient rack level cooling aligned with Start Campus' sustainability objectives and high density performance requirements.

Start Campus designs, builds and operates large scale digital infrastructure for next generation workloads. Its flagship campus in Sines is powered by 100 per cent renewable energy and targets a Power Usage Effectiveness (PUE) of 1.1 and a Water Usage Effectiveness (WUE) of 0, leveraging seawater cooling to support high density AI environments.

Kao Data acquires ex-industrial site in London's Park Royal for new data centre



Kao Data has acquired a new site on the former Frogmore Industrial Estate at Park Royal in London. Acquired in March 2026, the 4.7-acre site is intended to be transformed into a new data centre and, in-line with Kao Data's longstanding reputation for sustainability, will be designed, built and operated to the highest possible environmental and energy efficiency standards.

Plans for the 107,000ft² ex-industrial site, which is located within one of the UK and Europe's most sought after cloud computing regions, are currently being developed. This is in consultation with the Old Oak Park Royal Development Corporation (OPDC), local authorities and the community surrounding the site.

It is anticipated the new data centre in Park Royal will add to Kao Data's reputation for hosting some of the UK's most critical computing systems, supporting life science and healthcare research, AI workloads and financial services platforms.

BCS Consultancy expands into Southern Europe with Barcelona project win

BCS Consultancy has secured a major data centre development project in Barcelona, marking a significant milestone in its expansion into Spain. Iberia is rapidly becoming one of the most important growth markets for data centre development in Europe, challenging the longstanding dominance of the traditional Frankfurt, London, Amsterdam, Paris and Dublin (FLAP-D) hubs.

The project forms part of a large scale urban data centre development and represents a substantial investment in the region's digital infrastructure. It also underscores Spain's accelerating role as a key destination for next generation data centre growth in Europe. BCS is supporting the project across key delivery phases, applying its expertise to bring clarity and confidence to complex, high value programmes.

BCS has also appointed Alberto Modrego Eisman and Rhoana Zanotelli as senior consultants. Eisman brings a strong cost management background from JLL, while Zanotelli adds intensive experience delivering complex infrastructure projects across Europe.

Conflow Power Group signs deal with Katsina State to install 50,000 solar powered iLamp AI streetlights

Conflow Power Group (CPG), working with Mora Energy, has signed a formal agreement with the government of Katsina State in Nigeria for the large scale deployment of 50,000 iLamp units – solar powered smart streetlights that double as a revenue generating distributed AI data centre – making it Africa's first to host distributed AI compute infrastructure.

The deployment positions Katsina as Africa's first AI-powered smart state, going beyond the smart city concept to deliver intelligent infrastructure across an entire state. Each iLamp can, in addition to selling vast amounts of AI compute, also be configured with AI-enabled cameras and monitoring systems, supporting applications such as public safety, traffic management and infrastructure protection. Each unit can also provide public Wi-Fi, Bluetooth connectivity and high efficiency LED lighting.

Schneider Electric and GreenScale partner to develop new architecture for AI-ready data centre operations

Schneider Electric has partnered with GreenScale to support the development of its strategic sites in Europe. Schneider Electric will provide technical engineering and design consultancy to GreenScale, helping improve predictability, accelerate deployment and reduce operational risk.

GreenScale brings significant experience in data centre operations, software and digital twin technology, and will contribute a customer perspective on how infrastructure should be designed, deployed and managed in practice. Together, the organisations will define new operationally enhanced AI-ready reference architectures.

By partnering with Schneider Electric, GreenScale is embedding intelligence and automation into its designs. This includes using predictive analytics and condition based maintenance to optimise asset performance, lower lifecycle costs and enable more effective supply chain planning.

HSCALE closes second hyperscale data centre campus in Milan

HSCALE has closed its second large scale data centre campus in Milan. The transaction brings HSCALE's total committed power capacity in the Milan metropolitan area to 250MW, with ready for service dates in 2028.

The combined Milan investment represents over €2bn of capital deployment in the region, with pre-construction and procurement activities already underway to ensure delivery in line with customer demand. Both HSCALE campuses are located within Settimo – one of the most constrained and strategically important geographies in the market. Both sites are fully owned with power committed with key development milestones already achieved.

This level of site control and delivery certainty sets HSCALE apart in a market where securing land, power and permits can take a considerable amount of time. With both sites advancing through pre-construction, HSCALE is positioned to deliver capacity at scale and on schedule.

PROJECTS & CONTRACTS IN BRIEF

Excelerate Technology, Eutelsat and Livewire Digital have announced RathlinConnex, a landmark project to bring resilient, high performance connectivity to Rathlin Island – Northern Ireland's only inhabited offshore island.

Leeds Bradford Airport, Yorkshire's primary airport serving more than 80 destinations, has partnered with Freshwave to deliver reliable 4G mobile connectivity from all of the UK's mobile network operators to its refurbished terminal and newly opened extension.

Stellanor Datacenters has completed its acquisition of eight data centres from Redcentric. The addition of these facilities – serving approximately 450 enterprise customers – marks a milestone in Stellanor's strategy to build a leading platform of urban data centres, offering national and international enterprises wholesale and AI-ready colocation capacity.

Langley Holdings' Norwegian engine builder, Bergen Engines AS, has received a new order from Liberty Energy for more than 500MW of on-site power generation capacity for large scale AI data centre developments in the US.

Colt Technology Services has expanded its network in Istanbul to meet growing demand for infrastructure capacity supporting businesses' AI and digital transformation plans.

MISSED AN ISSUE?

CLICK ON A COVER TO READ MORE

FOR A FREE SUBSCRIPTION TO **Inside_Networks** CLICK HERE

Skills that pay the bills

Jon Healy of Salute explains why AI data centres are being built faster than the workforce that can run them – and what can be done about it

Since AI first came on to the scene, concerns around compute and capital have been front of mind. Understandably so, as the demand is quite incredible. But while the technical aspects of what it takes to power AI are more widely understood, the demands placed upon people, more specifically talent requirements, haven't received as much attention. Even if the right tech is deployed at this new pace, without the right skills in place AI's potential will forever be out of reach.

TALENT SCOUT

Now, as capital flows into AI data centres at extraordinary speed, executives are still laser focused on the physical ingredients of scale, grid access and capacity, mechanical and electrical (M&E) infrastructure and direct to chip cooling technologies. But the individuals who can design, commission and operate AI data centres are running in short supply.

While not entirely alien to traditional centres, AI power banks have certain nuances that bring the talent gap into sharp focus. This small pool of specialists is being redeployed across multiple sites simultaneously and new facilities are opening faster than experienced teams can be built, and trained, to run them.

In high density AI environments, under skilled or under resourced teams directly impact uptime, safety, compliance and long-term delivery value. Gaps in operational readiness, rising attrition rates and inconsistent performance across regions all signal back to the failure

to scale talent with the same intent as infrastructure.

NEW CHALLENGES

Fundamentally, just because you can build it doesn't mean you can staff it. AI data centres are far more complex than the facilities that came before. Higher rack densities demand direct to chip or immersion cooling, automation is embedded deeper into infrastructure management and energy efficiency targets are now treated as operational necessities, not afterthoughts.

Towards the end of last year, it was reported that around £2.2tn will be spent worldwide on data centres to support AI between now and 2029, which is roughly what the entire French economy was worth in 2024. In the UK alone, around 100 data centres will be built over the next few years to meet the demand for AI processing.

Such rapid scaling requires a skilled workforce to drive operations, but providers are struggling to ramp up commissioning agents fast enough. Training cycles that normally take months are being compressed, undermining quality and increasing risk of poor preparation. The engineers these facilities require need to combine electrical, mechanical and digital expertise including an in-depth understanding of liquid cooling systems and graphics processing unit (GPU) rack integration.

So, staffing and recruitment now means not just finding people but onboarding and training them within these aggressive timescales. We're talking about a profession that didn't exist at scale five years ago – only a few specialists dotted around at best. The trouble is, the pipeline to upskill them hasn't had enough time to mature and, right now, the industry is trying to run AI infrastructure with a workforce largely trained for a different era.

NOT THE ANSWER

The natural response to plug critical skills gaps is usually to hire at a faster rate, boost the remuneration incentives and just generally compete more aggressively for experienced professionals. But when every competitor is doing the same thing, what operators end up doing is redistributing existing capacity, all while driving up costs across the board. Instead of growing, the pool of experts is just being pursued relentlessly.

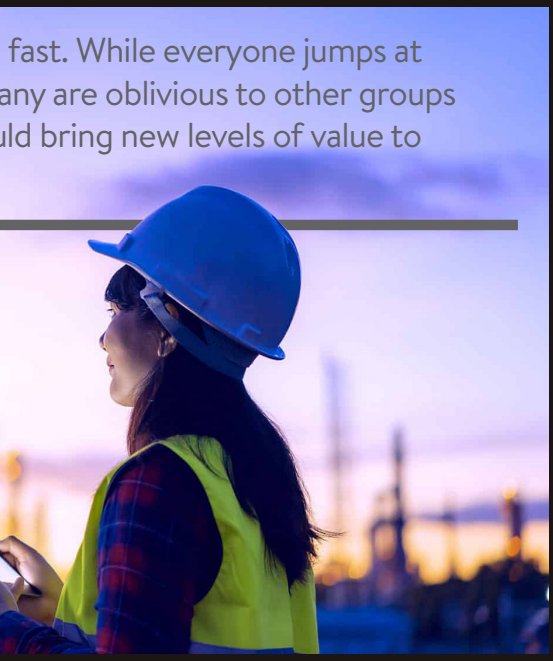
> 'The industry needs expertise – and
> traditional channels of hiring, so ma
> of highly skilled individuals that cou
> operators.'

As AI data centres continue to be built in new regions, leaders are forced to consider several factors like community integration, career pathways and long-term operational sustainability as part of their overarching

strategy to ensure a seamless integration. As an immediate solution to limited access to talent, operators rely on outsourced expertise which supports short-term priorities but restricts long-term growth.

KNOCK-ON EFFECT

In case there's any doubt, this talent shortage isn't an issue that's confined to the human resources department. Get this wrong and it has profound implications for leadership teams.



In high density AI environments, under skilled or under resourced teams directly impact uptime, safety, compliance and long-term delivery value. Gaps in operational readiness, rising attrition rates and inconsistent performance across regions all signal back to the failure to scale talent with the same intent as infrastructure.

And as the demand from AI continues to rise exponentially, any margin for error shrinks dramatically. So, this is our new reality – continuity across data centre delivery now depends just as much on people as it does on power availability or infrastructure resilience.

When certified specialists are unavailable, commissioning delays follow and capital deployment slows. When operating teams lack the skillsets that AI facilities demand, risk exposure rises. Data centres are now considered critical infrastructure, which means serious delays or vulnerabilities to these facilities can very quickly have severe national consequences.

WHERE DO WE GO?

For executives, the workforce challenge needs to be treated with the same rigour as capacity planning or power procurement. That means a few concrete shifts.

The industry needs expertise – and fast. While everyone jumps at traditional channels of hiring, so many are oblivious to other groups of highly skilled individuals that could bring new levels of value to operators. Military veterans represent one valuable source of expansion for the data centre industry. In fact, around 35 per cent of Salute's own workforce comes from a military background. And it's not hard to see why. The qualities that make someone effective in high pressure military environments translate directly into operational capabilities.

THEORY OF EVOLUTION

Sourcing the right skills requires a fundamental evolution in how the industry thinks about workforce development. Operators need to move away from fishing in a limited pool of experienced specialists and instead work to expand the talent

pipeline itself.

We need to collectively bring new people into the industry and equip them with the skills required for AI infrastructure. This means looking beyond traditional hiring channels, investing in structured training from day one and designing roles that can evolve as technologies and operating models change.

The most successful operators are standardising processes, developing multi-skilled teams with different areas of expertise and embedding learning into day to day operations. AI data centres will continue to be built, but facilities without qualified operators aren't resilient infrastructure. They're more like an expensive risk.

MIND THE GAP

Organisations that thrive in high density AI environments will be the ones who understand that sustainable growth depends on the people at every stage of the data centre lifecycle. They needed to be building that capability 2-3 years ago, to avoid the gap between infrastructure and workforce becoming one that can't be closed. ■

JON HEALY

Jon Healy is a senior technical leader at Salute Mission Critical, specialising in AI-enabled infrastructure, commissioning strategy and regulatory compliance across EMEA. With deep expertise in complex, high availability environments, Healy works closely with hyperscale, enterprise and colocation operators to design, validate and optimise mission critical facilities.

WE HOPE YOU HAVE ENJOYED

Inside_Networks

COMING UP IN THE
SEPTEMBER 26 ISSUE:
SPECIAL FEATURES:

> FIBRE OPTIC CABLING SYSTEMS
> COOLING AND CLIMATE MANAGEMENT

TO FIND OUT MORE ABOUT PROMOTION WITHIN THESE FEATURES CLICK HERE

> ALL THE LATEST NEWS, VIEWS, COMMENT AND ANALYSIS

> THE COMMON MISTAKES MADE DURING THE SPECIFICATION AND INSTALLATION OF CABLING, CONTAINMENT AND CABLE MANAGEMENT SYSTEMS IN DATA CENTRES

> OPTICAL FIBRE POLARITY AND WHY GETTING IT RIGHT MAKES SYSTEMS MORE PREDICTABLE, SCALABLE AND EASIER TO OPERATE

> WHY IT'S TIME TO TREAT COMMISSIONING AS A DISCIPLINE NOT A SERVICE

> THE CRITICAL ROLE OF INTEGRATED CONSTRUCTION SOFTWARE AND HOW IT IS IMPROVING REAL TIME VISIBILITY, COORDINATION AND DECISION MAKING

> WHY AI-ERA DATA CENTRES NEED TO LOOK BEYOND GRID POWER

> COOLING THE AI DATA CENTRE WORKLOADS OF THE FUTURE

> THE PROCUREMENT PROCESS, THE PLAYERS INVOLVED AND HOW TO BENEFIT AS A SELLER AND A PURCHASER

> THE ROLE OPTICAL FIBRE PLAYS IN SUPPORTING HIGHER NETWORK SPEEDS

> MOVES, ADDS AND CHANGES IN THE CHANNEL

> NETWORK INFRASTRUCTURE CASE STUDIES FROM AROUND THE WORLD

> THE LATEST PRODUCT, SYSTEM AND SERVICE DEVELOPMENTS

FOR A FREE SUBSCRIPTION CLICK HERE